Co-creating knowledge for a new service: Case Farm League

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Yhteiskehittäminen tiedon tuottamisessa uudelle palvelulle: Case Farm League

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Pelialan globaali ja erittäin kilpailtu markkina, sekä muuttuva toimintaympäristö tekevät alalla menestymisestä haastavaa. Tiedonjakamista helpottavat rakenteet kuten hautomot, kiihdyttämöt ja verkostot auttavat startup-yrityksiä kohtaamaan alan haasteet.

Opinnäytetyön tarkoitus oli kartoittaa Helsingissä toimivan pelialan hautomon palvelua ja tavoite saada yhteiskehittämisen avulla uutta tietoa ja ideoita toiminnan kehittämiseksi. Palvelu oli uusi ja toiminta kehittämistyön aloitushetkellä alkutekijöissään.

Työn toimeksiantaja oli Farm League yrityshautomo, joka alkoi yhteisprojektina Metropolian, Baltic Game Industry projektin ja Games Factoryn kesken. Baltic Game Industry on EU-rahoitteinen projekti, jonka tavoite on edistää Baltian alueella toimivien pelialan tiimien yhteistyötä ja kansainvälistymistä. Games Factory oli Helsingin pelialan edustusto ja ekosysteemin keskittymä.

Hautomon tavoitteena oli tukea tuoreiden innovatiivisten pelitiimien alkutaivalta startup-yrittäjyydessä pelialan erityispiirteet huomioiden. Opinnäytetyön avulla pyrittiin löytämään vastaukset siihen, minkälaisia haasteita hautomoon hakeneilla tiimeillä oli omassa toiminnassaan ja mitä he odottivat Farmin palvelulta.

Kehittämistyön tietoperusta koostuu katsauksesta peleihin ja pelialaan sekä ekosysteemeihin. Nämä käsitteet määrittelevät toimeksiantajana toimivan hautomon toimintaympäristöä Tietoperustassa käydään läpi myös tiedon jakamisen ja uuden tiedon luomisen malleja ja teoriaa hiljaisen ja eksplisiittisen tiedon näkökulmasta. Lisäksi sivutaan arvonluonnin teorioita.

Kehittämistyön menetelmäksi valittiin palvelumuotoilun tuplatimantti. Kehittämistyön etenemistä tarkasteltiin tuplatimantin neljän vaiheen: tutki, määrittele, kehitä ja toimita kautta. Prosessin toteutuksessa hyödynnettiin palvelumuotoiluun soveltuvia laadullisia menetelmiä: haastattelua, havainnointia ja erilaisia työpajoja.

Kehittämistyön tuloksena tunnistettiin tiimien haasteina olevan tietotulva, yrittäjätaidot ja rahoitus, sekä verkostoituminen ja asiantuntijoiden tuki. Kehittämistyön tuloksena myös todettiin nykyisen palvelun rakennuspalikoiden eli henkilökohtaisen coachauksen, mentoroinnin, verkostoitumismahdollisuuksien ja työpajojen luovan toimivan pohjan tiimeille arvonluonnin näkökulmasta. Lisäksi saatiin konkreettisia kehittämisideoita nykyisen palvelun parantamiseksi ja toiminnan kehittämiseksi.

Palvelumuotoilun prosessi ja laadulliset menetelmät tuottivat toivotunlaista tietoa palvelusta. Haasteena kehittämistyön toteutuksessa oli muuttuva toimintaympäristö, startup-tiimien tiukat aikataulut ja sekä toimeksiantajan että tiimien rajalliset resurssit.

Asiasanat: peliala, ekosysteemi, tiedon luominen, arvonluonti

Laurea University of Applied Sciences **Abstract**
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The game industry is global, highly competitive and the market is volatile, which makes it hard to succeed in it. Knowledge sharing structures like incubators, accelerators and networks help startup teams tackle challenges they face while trying to make their big break.

The purpose of this thesis was to map out the current operations of the Farm League incubator operating in Helsinki. The goal was to produce knowledge and get valuable ideas on developing the service further. The service was new and just starting when this development project began.

This project was commissioned by Farm League game incubator which started as a co-operation between Metropolia UAS, Baltic Game Industry and Games Factory. Baltic Game Industry is an EU-project that aims at internalization and co-operation of game teams operating around the Baltic Sea area. Games Factory was a game industry embassy and community hub in Helsinki.

The aim of Farm League was to support fresh innovative game teams in their early startup stage. This development project tried to find answers to the struggles of the teams applying to the incubator program and the expectations they were trying to gain from the Farm service.

The theoretical framework of this development project discusses games, the game industry and ecosystems, which form the operational environment of the Farm League incubator. In addition, knowledge sharing, and creation are gone through in relation to tacit and explicit knowledge. Service dominant logic and customer dominant logic in value creation, which are logically tied to knowledge creation, wrap up the theoretical section.

The method chosen for this thesis is the service design double diamond. The development process followed the stages of the double diamond: discover, define, develop and deliver. The qualitative research methods used were observation, interviews and different workshops.

As a result of the development project, common struggles within the teams were found to be information overload, business skills and funding, as well as networking and mentor support. The building blocks of current service were recognized to be individual coaching, mentoring, networking opportunities and workshops, which all had the possibility to create value for the teams. Concrete development ideas were collected regarding the current service aspects and future service development.

The service design double diamond worked well in this kind of development project. Challenges during development were the changing operational environment, startup teams' schedules and limited resources both in the teams as well as with the commissioner. The results can be used to assess incubator services in the game industry ecosystem.
Keywords: game industry, ecosystem, knowledge creation, value creation

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1 Introduction

The game industry is a multibillion dollar hit-driven business that has surpassed every other cultural industry in reach and monetary value. After Finnish success stories like Rovio with their Angry Birds (2010) and Supercell raking in money with Clash of Clans (2012), the number of hopefuls looking to make their break in the industry exploded in Finland.

Doing business in games is not easy, the industry is highly competitive and volatile at best, so especially young startups struggle to get by while also continually learning and building their own networks. No matter how good an idea is, a team needs to know how to do business and have help at hand. Knowledge sharing structures like incubators, accelerators and mentoring networks are an important part in helping young companies succeed (BGI 2020).

Farm League in Helsinki, Finland is a game specific incubator, which was first piloted in the fall of 2018. It began as a joint operation between Metropolia University of Applied Sciences and Games Factory business hub as part of Baltic Game Industry (BGI) project. Farm League was created to give starting teams the comfort of a community inside an industry showroom, with the opportunity to learn from industry experts and network with global visitors and the local community. While this thesis is being published, Farm League is being rebranded and re-organized as the Living Game Intelligence Network (LGIN).

The level of professionalism in the games industry has grown steadily and even small startups currently perform on a level that could only be reached by few in 2003 when Neogames Finland first started to monitor the progress of the Finnish Game Industry. This huge shift in professionalism has been driven by change in platforms, technologies, the business environment and games themselves. (Neogames 2018.)

The global startup ecosystem report for year 2019 (Startup Genome) lists Greater Helsinki as one of the ecosystems to watch. The games industry drives rapid growth and allows Greater Helsinki to be listed as one of the challenger ecosystems currently outside the top 10 but with potential to rise in the ranks.

The purpose of this thesis was to map out the current operations of the Farm League incubator operating in Helsinki. The goal was to produce knowledge and get valuable ideas on developing the service further. Questions that this thesis is trying to answer are: What are some of the common struggles the teams attending the incubator program were facing when they decided to take part in the program? How do the incubator teams hope that the Farm League could help them solve their problems and reach their goals through its services?

The operational field being the game industry brings a unique twist to the business side and makes it instantly global. The fact that the teams are operating in a startup hub and are all

startups themselves guides the angle from which we dive into the subject of defining and developing the service that is the Farm.

The structure of this thesis is built so that key concepts are first gone through in the theoretical framework. The development project and chosen method are then assessed before moving on to the actual execution and development process. Results are then presented with the thesis ending in discussion and conclusions.

2 Theoretical framework

The theoretical framework of this thesis relies heavily in the creation and distribution of knowledge and the special characteristics of games and the game industry. The concept of games and gaming and some background information of the game business are gone through first. The definitions of knowledge and characteristics of knowledge creation are explained, portraying some models related to knowledge-sharing. Value creation is explored through the concepts of service- and customer dominant logics.

2.1 Characteristics of games

What is a game? There is still to be an agreed-upon definition of what a game or a video game is. Bernard Suit has used the phrase "the voluntary attempt to overcome unnecessary obstacles" to portray what games are about. This phrase contains much of what is significant to games: overcoming obstacles according to a set of limiting rules. (Winnerling, Kerschbaumer & Chatfield 2014.)

The ancestors of games can be thought to be the optical devices marketed for children and families in the 19th century and followed by the development of television and other media machines before the first actual technology made for gaming (Huhtamo 2012, 30). Video games have also, according to Nichols (2014, 12-13), been seen as fancy toys, although they have always been best suited for an adult audience, which speaks against referring to them as toys. Instead of being toys, video games are communication devices which enables them to become media hubs.

The first arcade video game was Nolan Bushnell's and Ted Dabney's Computer Space, released in 1971 by Nutting Associates. Magnavox Odyssey released in 1972 was the world's first home video game console. It could play 12 different games, with the best known being the video game Tennis. (Herman, 2012. 54-55.)

Schwarz (2014, 140) agrees with Suit's portrayal that video games offer challenges and interactive immersion. In early games the balance was constantly adjusted to be more competitive, which meant that many of the early titles were notoriously difficult to master and the leader boards displayed at arcade parlors became an attraction in themselves. As the industry

progressed from this highly competitive model with technological attractions portrayed at arcade parlors for the "attraction of the self", towards the gratification of more casual gaming dominated by home-based entertainment systems the whole industry was changed. (Therrien 2012, 2.)

Schwarz (2014, 140) also suggests that since video games leave a lot of the narrative up to the player's imagination, the off-screen space becomes as or even more important than what is on the screen. An engaging experience is built around the game's structural design and audiovisuals as well as narration, which is similar to movies.

The experience of gaming is informed by historical and cultural codes and discursive formations – whether the gamer is aware of it or not. The games may be played by persons, but they are also largely affected by the context and conditions in which we live our lives. (Huhtamo 2012, 30.)

Interactions and development of technology, industry and culture are the three main players in the history of video games. The three circuits were portrayed in the 2003 book Digital Play by Kline, Dyer-Witheford and De Peuter. (Therrien 2012, 22.) Games started growing in importance after 2004 which was the first year the industry earned more than Hollywood's domestic box office. Video games emerged as integral parts of branding and advertising. (Nichols 2014, 1-2.)

To fully understand video games and their impact on society, understanding the industrial system of production behind them is essential. Video games were produced as commodities from almost the very beginning and that is why they are tied to a variety of social trends and cultural industries. Market forces serve to constrain and direct game development, essentially shaping the games we enjoy at any given time. (Nichols 2014,12.)

Therrien (2012, 22) argues that with emerging and developing technology and the big industry players marketing the technological advancements, culture has often been left in a smaller role than it deserves. The cultural circuit around creating and consuming video games for the experience they provide has played an integral role in the rise of gaming industry and building a strong network of professionals that keep each other and the industry afloat.

2.1.1 Game Industry

The video game industry emerged as a subset of, not the toy industry, but the computer industry. The distribution models of the gaming industry however are based on films, toys and recorded music. The business model of the industry draws from computing, toy and first and foremost film industry (Nichols 2014, 12-13). Video game industry has developed its own business logic by adapting pieces of existing cultural industries' best practices (Nichols 2014, 166).

Video games developed by large studios and distributed by major publishers, also referred to as triple-A (AAA) games dominated the early years of the game industry business due to their massive development and marketing budgets that made sure the games were high quality and taking up shelf space. Triple-A games can be compared to movie blockbusters. It costs a fortune to make a triple-A game and since the game industry is a hit-driven business, one game could make or break a company. (Schultz 2018.)

Game development in Finland started as a hobby of individuals as home computers became popular in the mid 80's and the first commercial games were released by developers. The first game development teams started to form at the end of the decade spurred on by events such as Assembly, which was first organized in 1992. (Neogames 2018, 7.)

In 2006, Elina Koivisto gave a speech in CyberGames conference about mobile gaming in year 2010. Snake was still relevant in the mobile game space and Tetris was still among top sellers. Mobile games were casual, but research was already expecting developments in the mobile platform. Cross-platform features were a somewhat novelty, and multi-player features were becoming more common. Koivisto (2006, 2) spoke about the operators' dominant role in the value chain, this can be compared to the role of Apple and Andoird environments in the current market.

The largest population of video game designers can be found in the US and Japan. Canada took third place in 2010 overtaking the UK. Canadian games have been world leaders in terms of cultural relevance and design. (Schallegger 2014, 54.) Koivisto (2006, 2) mentioned that key parties in the game industry value chain like the International Game Developers Association (IGDA) would be taking a more specialized role in the industry by 2010. IGDA has indeed become the voice of all individuals creating games. They aim in advancing careers, connecting members with each other and promoting professional game development (IGDA, 2020).

The game industry power has been concentrated to hardware manufacture, software development, software publishing and retail. Industry decisions are governed by logics aiming to maximize profit while maintaining industry autonomy and stability. The companies try to keep production costs and therefore risks down, ensure long-term demand by aiming for long-term audiences, control demand when possible, make products that demand attention and prompt innovation. (Nichols 2014, 166.)

Crogan (2015, 10) believes that indie game development is a significant component of the video game industry. The global financial crisis hit the console-based triple-A industry at roughly the same time that smartphones and tablet devices opened the market for less than perfect looking games and gamified apps (Crogan 2015, 10-11). This statement is backed by Accenture's report from 2014 identifying the trend that digital availability of cheap and "decent" alternatives builds consumer expectations for value creation (Accenture 2014, 4).

Accenture (2014, 4) also stated in their report that the customer base of the industry is ever evolving and increasingly diverse, which makes it harder to predict gaming behaviors. Digitalization also gave a voice for the players – social media has an increased influence in purchasing decisions (Accenture 2014, 4). Crogan (2015, 10-11) agrees, stating that the range of games and game players matured and expanded, which opened the industry culture to new experimentation and expression.

Accenture (2014, 6) reports that digital delivery is disrupting the game industry. Ongoing customer engagement and development operations are becoming the new normal. Crogan (2015, 10-11) adds that new distribution models like Steam and game bundling made room for cheaper and different games. Unity and other cross-platform game packages as well as user communities brought expensive proprietary engines and indie production toolsets closer together (Crogan 2015, 10-11).

Accenture (2014, 4-6) identified four trends driving industry change: an evolving customer base and digital delivery, which are both gone through in more detail above, and also the evolving definition of games and proliferating business models. Innovative technologies that allow for immersive gaming experiences together with multi-channel storytelling that combines the old with the newest bring heat from film and media companies as well as more non-traditional gaming companies such as Amazon. All this while the spread of connected devices and new delivery methods continue to challenge the old “single pierce point” business model.

For many years video games were designed by men for a mainly male audience, but the number of females playing video games has been on a steady rise reaching almost 50% in important European markets in 2014 (Schwarz 2014, 140). The first success stories of the Finnish gaming industry were Housmarque’s Supreme Snowboarding and Remedy’s Max Payne in the late 90’s as well as Sulake’s Habbo Hotel which became an internet sensation. Since then the Finnish industry has grown steadily from raking 40 million in turnover in the year 2004 to 1800 million in 2014 and becoming a two-billion-euro annual business in 2018. (Neogames 2018.)

The relative turnover (turnover per employee) has grown much faster in the game industry than in traditional industries – which is typical for born global IP-based hi-tech industries. IP refers to Internet Protocol, which means the same as networked systems that communicate with each other. Tekes had a games industry specific funding program Skene in 2012-2015 during which they funded the Finnish game industry with 28 million euros. Private investments during Skene reached 53 million euros (excluding the Supercell Gungho Softbank acquisition). (Tekes 2015.)

The number of companies grew from 40 companies in 2004 to 260 by the end of 2014. The number of companies has since gone down to 220 in 2018. Even though the number of studios

is smaller, the industry employs more people now (3200) than it did before, with the number of non-Finnish employees growing every year. (Neogames, 2014-2018.)

According to research by Monica McGill for FuturePlay (2008, 89) the gaming industry desires certain qualities that game education should cover. Relevant overall skills include networking, communication and interpersonal skills. These are skills that the incubator program can help teams and individuals strengthen. The research by McGill (2008) focused mainly on developer positions, but other personal abilities mentioned in the research like attitude and problem-solving skills are applicable to individuals working in the industry regardless of their role.

There is an increased business focus in first round startups, which enables young companies to establish a sustainable business through subcontracting. Junior employees are also more often educated through work for hire, which is a great possibility for starting teams and individuals. (Neogames 2018, 30.)

2.1.2 Game industry ecosystems

” Business ecosystems consist of a heterogeneous and continuously evolving set of entities that are interconnected through a complex, global network of relationships.” (Basole et. al. 2015.)

Even though the games industry is a global marketplace, the production remains local. Co-location and opportunities for collaboration benefit game startups and micro game businesses in terms of shared know-how and opportunities to enhance their profiles. Bringing independent mentors and producers into direct contact with startups increases the value of hubs and their networks. (Crogan 2015, 6-7.)

The Global Startup Ecosystem Report for the year 2018 by Startup Genome recognized Greater Helsinki as one of the most important gaming ecosystems in the world and the top ecosystem for local connectedness globally. The report notes that the strong community orientation of the Helsinki area gaming ecosystem allows for more mature gaming enterprises to support a new generation of startups. (NASDAQ OMX 2018.)

The Good Hubbing Guide suggests that embedding creative businesses in a regional economy will help them become more sustainable and thrive. Each region will produce a different kind of hub due to their local community of practice. Better innovation comes from having active inclusion practices that promote diversity. (Crogan 2015, 6-7.)

Startups operate in an environment of extreme uncertainty and volatility. Building a successful business is every entrepreneurs goal, but only 1 in 12 will succeed in their efforts. One of the most important principles among success stories is balance. Balance between the inner

dimensions (team, product, finance, customer relationship and legal) and the outer dimensions eg. traction (customers, users, product usage and revenue) of a startup being one of the most important ones. (Global Startup Ecosystem Report 2019, 19.)

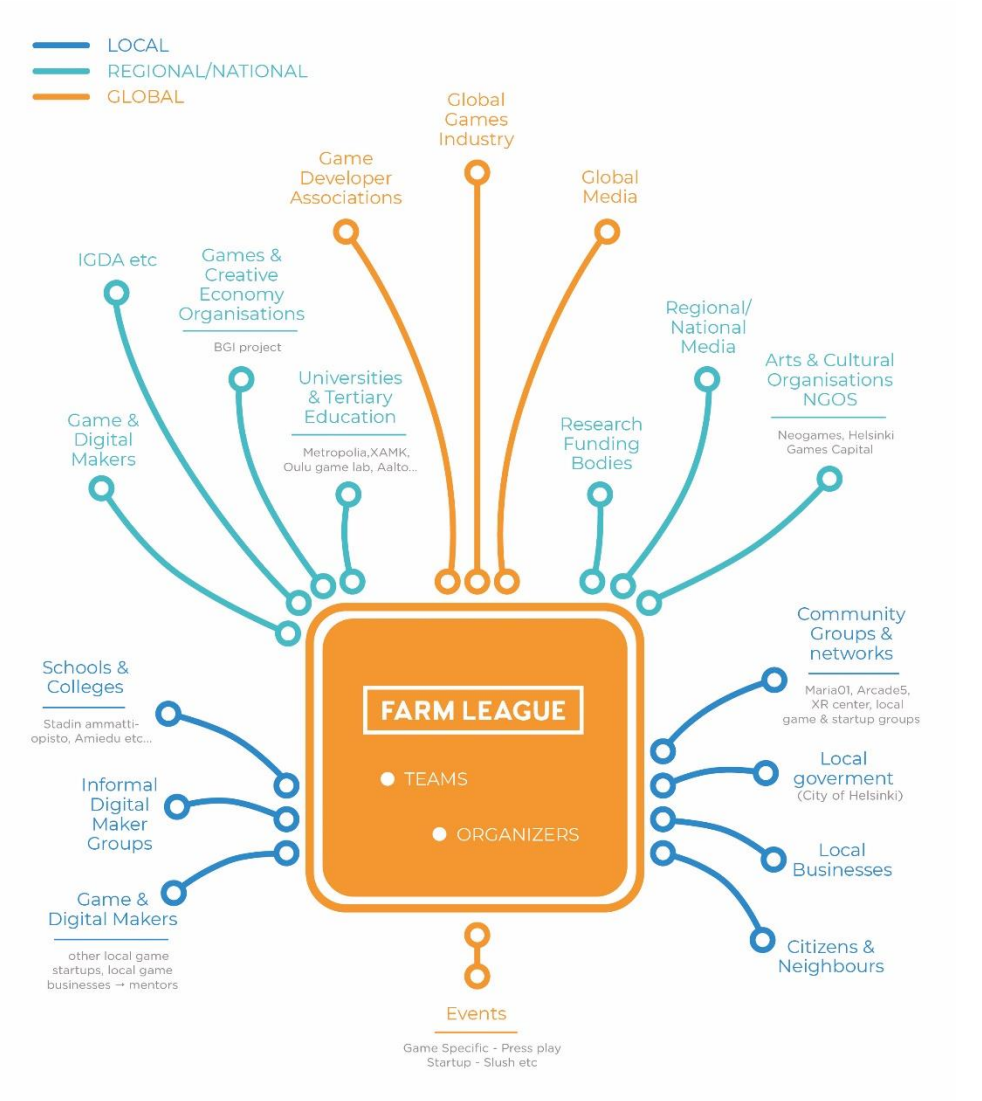

Figure 1: Adaptation of the Creative territory (Crogan et. al. 2015).

Presented above (Figure 1) is the “creative territory” from the Good Hubbing Guide by Crogan et. al. (2015) that has been adapted to the incubator in this case. Building a successful creative territory requires the nation, region and community to be embedded in its identity. Research made for the Good Hubbing Guide (Crogan et. al. 2015) argued that creativity as a cultural asset is commonly held and more importantly – socially enabled.

The Global Entrepreneurship Network supports these views, urging local leaders to avoid "Silicon Silliness" – a strategy leaning on replicating Silicon Valley. Instead, building stronger ecosystems requires driving connectedness and enabling the sharing of knowledge and networks (Global Startup Ecosystem Report 2019). Incubators and regional game clusters were valued also amongst the companies interviewed in the Finnish Game Industry Report (FGIR) of 2018. A solid game developers' community provides support to its members and industry organizations, such as the International Game Developer Association (IGDA) cooperation in taking care of its group of developers. (Neogames 2018, 31.)

Working with regional schools, colleges and universities helps maintain the talent flow to the ecosystem and transform people's perception of games as a creative career opportunity. The surrounding community of game and creative makers as well as non-members in the local community should be included in the operations through events, social media and collaborations to help refresh the beneficiaries and make the work open and inclusive. (Crogan 2015, 7-8.)

Jonathan Ortmans from GEN echoes again Crogan's thoughts, pointing out that rather than the traditional way of putting up barriers when concerns over "brain drain" or economic distance between regions arise, the new generation of ecosystems act as magnets to attract talent, networks and growth. Technological advancements allow regions to specialize in different startup sub-sectors. (Global Startup Ecosystem Report 2019.)

2.1.3 The Farm League incubator

Farm League started as a Game Studio Incubator program at the beginning of 2019. The incubator had a couple of "pilot teams" residing at the Games Factory in the fall period of 2018, but the first batch of teams officially started in January 2019. The program started as a joint effort between the Baltic Game Industry project, Metropolia and Games Factory to launch a Helsinki-based game specific incubator. Games Factory was started as a community hub and embassy for the gaming industry. (Games Factory, 2018.)

Games Factory offered an exciting environment for industry startups since it was the place for networking events, seminars, game nights and parties while offering the comfort of community and affordable office spaces. The former Games Factory building is located in Helsinki, right next door to Maria01 which is a massive start up hub offering networking and support as well as multiple events. There were several games industry startups residing at the Factory when the Farm League started their operations there.

The Farm League program was marketed for ambitious and committed teams who had realistic goals. Diversity was celebrated and previous experience in publishing games seen as a

plus. Teams were required to have at least one ongoing project and a funding plan. (Games Factory, 2018.)

The incubator offered two tracks to choose from at the beginning of 2019. Remote Baltic Game Incubator (BGI) was intended as a mentoring program funded by the Baltic Game Industry EU project. The remote track promised free attendance to weekly workshops with professionals and masterclasses with industry seniors (Games Factory, 2018). Three teams started the remote track in January 2019 but only one team continued throughout the spring.

Second track - Farm League offered shared offices at the Games Factory building, day-to-day support from the Farm League lead, weekly workshops held by professionals, masterclasses with games industry seniors, outsourcing and the community, network services and support from the Games Factory side (Games Factory, 2018). Six teams started or continued the Farm track in January.

Games Factory filed for bankruptcy on September 13. 2019. The plan for building a showcase and embassy by filling the office spaces with small and medium games industry companies and organizing events seemed to fall through. (Talouselämä 2019.) Maria 01 claimed the office space intended for Farm League and the incubator teams were forced to move temporarily to new offices at Ensi linja. This change affected both the teams from batch 1 continuing to the fall period of 2019, as well as the teams that started in the second batch in August 2019.

The CEO of Games Factory, who had previously been a big part of Farm League operations alongside the Farm Lead, had to resign. Most of the Games Factory staff were let go. Farm League, which was never tied to solely Games Factory, was able to continue operating in the new location and retained the option to use Arcade5 spaces for events or meetings.

The operations of Games Factory were reinvented, and a new non-profit association, Helsinki Games Capital, was dreamed up to continue in its footsteps. The building was renamed as Arcade5 and continues as a games specific building inside the Maria01 campus. A lot of the companies have stayed in the building throughout this change in operations. (HGI, 2019.)

2.2 Knowledge creation

The classic definition of knowledge by Plato is that it is a well justified true belief. As a word, knowledge refers to the verb ‘know’. Data and information are often confused with knowledge. Data becomes information when it is analyzed, handled and put into context. Information becomes knowledge when it is used to compare, assess consequences, create connections and put in a dialogue. (Virtainlahti 2009, 31-32.)

Roos and von Krogh (1995, 1) have stated: “What you see depends on who you are”, which suggests that knowledge is subjective. Knowledge is the result from the interpretation of an information flow, created in dynamic interaction between people in a specific context. Not only knowledge, but also the knowledge about knowledge depends on the context. (Bukh et. al. 2005, 16, 18-19.) Järvelä et al. (2006, 128-129) also chime in, saying that communal knowledge creation must be evaluated in context to the group as an activity bound to a larger community. In communities, knowledge is divided to material and linguistic environments in the form of psychological and physical tools and social practices.

Frappaolo (2006, 8-9) seconds this view, stating that knowledge is always relevant to specific conditions and stimulates action in response to those conditions. This is also confirmed by Nonaka, Toyama & Hirata, (2015, 18) who summarize that knowledge is derived from subjective perceptions of people in a certain context and made objective through a social process between a group or individuals in a specific setting.

Nishant Shan spoke at the U-Create seminar 29.11.2019 about Creativity in Post-Truth Milieu. He suggested that creativity is about reworking the structures of authorship, authority and authenticity; structures we take for granted. Reworking the structures in a social context can become a platform for new knowledge creation.

Frappaolo (2006, 8-9) suggested that knowledge is derived from multiple experiences and perspectives – It is connected. The goal of knowledge management is to encourage the sharing and internalization of tacit knowledge in the application of new innovative responses in a volatile work environment (Frappaolo 2006, 8-9). Improved co-operation and wider range of possibilities are the likely outcomes of becoming familiar with the way colleagues, cooperators and others understand ‘reality’ (Bukh et. al. 2005, 18-19).

Tacit knowledge can be segmented into technical and cognitive dimensions. The technical dimension consists of informal skills or crafts that are hard to pinpoint but can be captured in the term “know-how”. The cognitive dimension consists of things like mental models, beliefs, schemata and perceptions that we as individuals take for granted but that might be alien to others. When we look at the cognitive dimension, we are looking at our image of reality (what is) and our personal vision for the future (what ought to be) that shape the way we see the world around us. (Nonaka & Takeuchi 1995, 8.)

2.2.1 Tacit and explicit knowledge

Frappaolo (2006, 10) suggests that knowledge can be classified by its complexity. Explicit knowledge is easily transmitted from person to person with electronic devices and is referred to as information in the formal language. The challenges of explicit knowledge have many times to do with its sheer volume.

Nonaka & Takeuchi (1995, 8) disagree with Frappaolo, claiming that Western management has a history of seeing all knowledge as something that can be expressed in words and numbers and easily communicated – "explicit". Knowledge has been used interchangeably with words like "data" and "information". Japanese companies however have long thought of knowledge to be primarily something that is not easily visible or expressible - "tacit".

Frappaolo (2006, 10) sees tacit knowledge as something that is efficiently passed on from person to person since it is personal knowledge that is embedded in individual experience. Good practices of sharing tacit knowledge according to Frappaolo include things like mentoring and apprenticeships. Nonaka et. al. (2015, 6-7) agree with Frappaolo on the notion that knowledge is created from human interactions which makes it subjective, process-related, aesthetic and created through practice.

The subjective nature of knowledge stems from the fact that every person has different viewpoints, perspectives and capabilities. These differences are necessary for the creation of knowledge, because the" truth" differs according to where we view it and who we are. Experience, which is a subjective process of feeling, is where knowledge emerges. People create knowledge in interactions with each other and their environment. In this process a person's individual thoughts are justified through social interaction and become objective "truth". (Nonaka et. al. 2015, 7-10, 13.)

Knowledge does not lose value when used by a large number of people, which makes it a revenue-increasing infinite resource. The value of knowledge comes from recategorization: creation of new types and combinations of knowledge. (Nonaka et. al. 2015, 6-7.)

Our value judgements of what things like truth, goodness or beauty are become the basis for knowledge creation. All of these aspects are aesthetic and thus depend on our aesthetic sense. Our aesthetic sense is necessary for determining what kind of knowledge to create and for judging the knowledge being created. (Nonaka et. al. 2015, 12-13.)

2.2.2 Knowledge creation in groups

There are three key characteristics to knowledge creation that help tacit knowledge become explicit. Figurative language and symbolism are the first of the three, and utilizes people's imagination, metaphors and analogy in making the inexpressible understood by people from different backgrounds. Secondly, personal knowledge needs to be made organizational in order to disseminate knowledge. Interaction by individuals in a group: discussion, experience sharing, and observation can help crystallize or amplify knowledge. The way how new knowledge is born in ambiguity (out of chaos) and redundancy that encourages frequent dialogue and communication is the third characteristic. (Nonaka & Takeuchi 1995, 12-14.)

Communal learning can be divided into two main orientations that differ in the way learning is perceived in the communal setting. The socio-cognitive orientation is interested in the cognitive processes of communal knowledge creation. Cognitive processes in the communal activities and the learning results gained are thought to be interrelated. The focus is on cognitive factors of learner interaction and their impact on individual learning. The socio-cultural orientation of communal learning highlights the social character of knowledge creation. Different tools as well as the historical and cultural environment are perceived as having a communicative role in knowledge creation. (Järvelä, Häkkinen & Lehtinen 2006, 125-126, 128-129.)

Anne-Francoise Schmid presented in the fourth U-Create seminar 29.11.2019 that it is impossible to build consensus between interdisciplinary teams just by the means of language; the art of creation is needed. Language is an obstacle, but some consensus needs to be reached, nonetheless. It is a matter of reasoning when solving complex problems. She gave an example of research on genetically modified fish – the team had to decide not to treat the problem as a natural fish but an X object which is scattered over all the disciplines solving the problem. Her speech supported the views of Nonaka et. al. on how the inexpressible can be made understandable through knowledge creation.

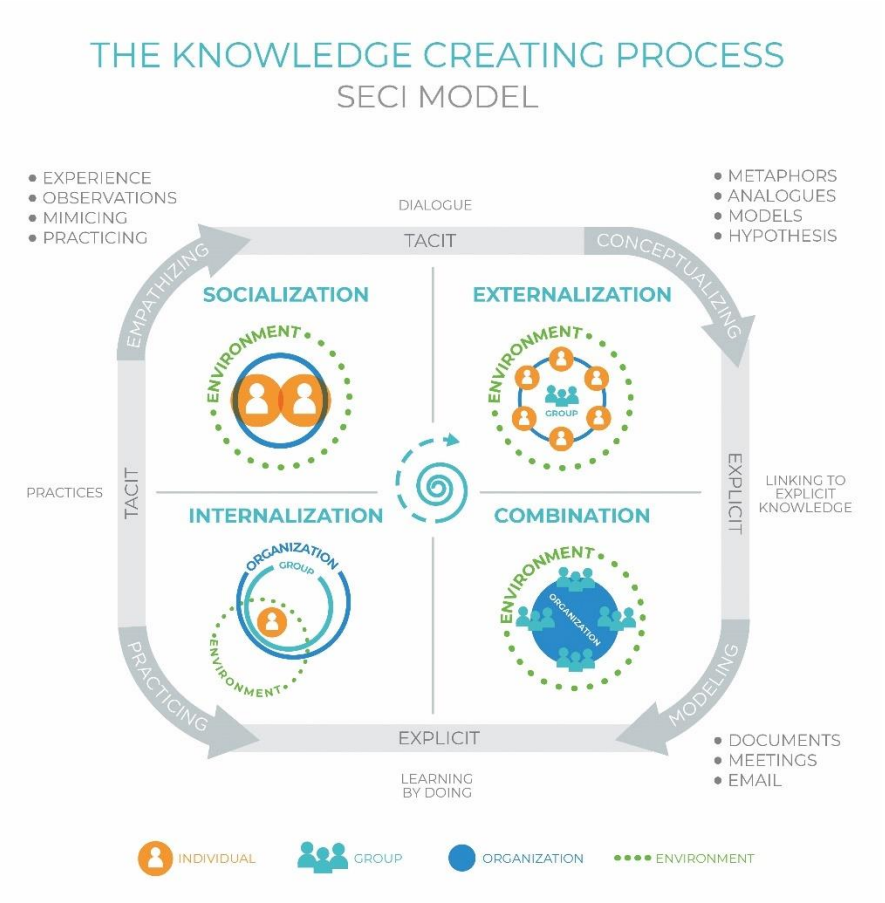

Figure 2: The SECI model of knowledge-creation based on Nonaka et. al. 2015, 19 and Virtainlahti 2009, 99.

The SECI-model portraying the process of knowledge-creation was first introduced by Nonaka & Takeuchi in 1995. Virtainlahti presented her own modification of the model in 2009 which has been referred to above (Figure 2), and the model used as a basis for the above picture is a refined version of the original model by Nonaka et. al. from 2015. The model gets its name from the four steps of transforming knowledge from tacit to explicit and back to tacit again; socialization, externalization, combination and internalization. (Virtainlahti 2009, 98.)

Virtainlahti (2009) describes the socialization stage as sharing tacit knowledge between experts through mental models, experiences and technical skills with the essential thing transmitted being experience. According to Nonaka et. al. (2015, 20) the socialization stage is where individual tacit knowledge, which is usually specific to a particular time and space, is shared in day-to-day social interactions and shared experiences in organizations through apprenticeships or similar settings which creates new tacit knowledge.

Järvelä et al. (2006, 127-128) have similar thoughts to the SECI-model, stating that in the socio-cultural orientation, communal learning is seen as a circular process where individual

“tacit” knowledge about a subject is made explicit in a social setting. Communal explicit understanding is built through conversations by using psychological tools such as concepts that are the basis of “tacit knowledge”.

Tacit knowledge that individuals have created sharing an experience is made explicit through images, language, models and other forms of expression (Nonaka et. al. 2015, 22). Virtainlahti (2009, 98) lists dialogue and co-observation as ways to put tacit knowledge into words creating new knowledge. The act of making tacit knowledge explicit through verbalization and conceptualization is called externalization in the SECI model (Nonaka et. al. 2015, 22).

During knowledge combination, explicit knowledge turns into more complex explicit knowledge (Virtainlahti 2009, 98). Nonaka et. al. (2015, 23) elaborate on this by stating knowledge combination happens when explicit knowledge gathered from inside or outside the organization is edited, combined or processed to form more systematic and complex arrays of explicit knowledge which is then spread across the organization.

Created knowledge that is shared and created in the organization is converted into tacit knowledge during the internalization process. In order to internalize explicit knowledge into tacit personal knowledge it has to be actualized through actions, reflection and practice. (Nonaka et. al. 2015, 24.) Virtainlahti (2009, 98) adds that the internalization of explicit knowledge into tacit happens through a learning process (learning by doing).

In an ideal situation, knowledge should increase in quantity and quality when transferred from an individual to a group and further to an organization. The knowledge can however also start decreasing in quantity and quality if the model of knowledge creation is impeded in any way. (Nonaka et. al. 2015, 26.)

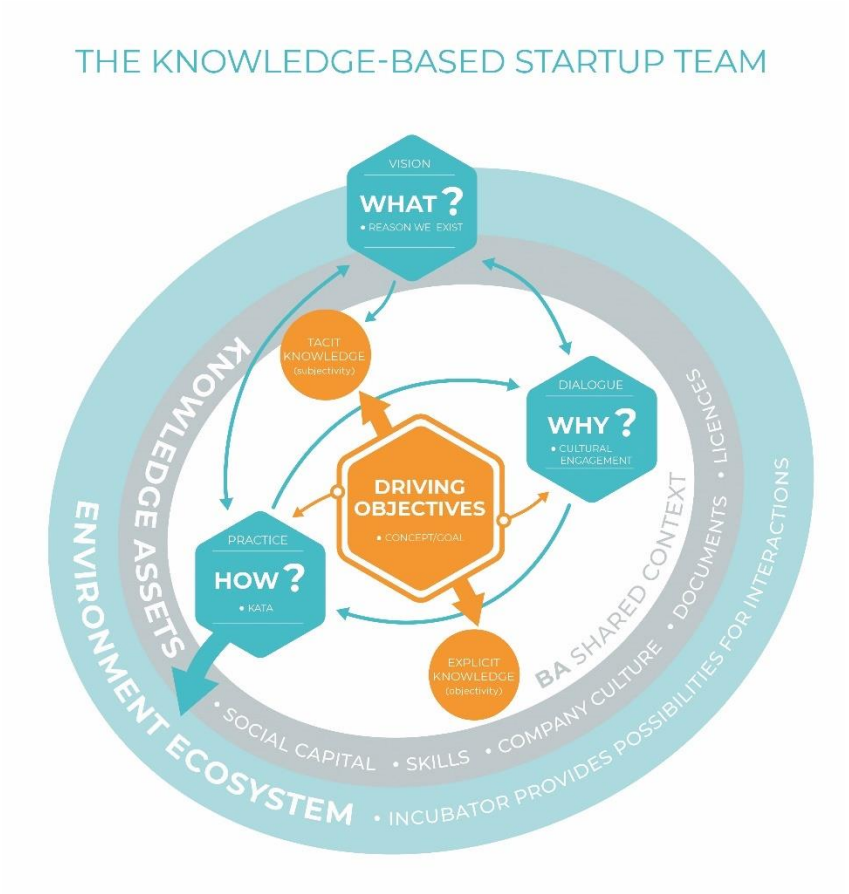

Figure 3: Process model of a knowledge-based firm versioned from Nonaka et. al. 2015, 27.

The process model of a knowledge-based firm illustrated above (Figure 3), shows how knowledge is created through dynamic interaction with the environment. The driving objectives in the middle represent the mechanism that helps a firm realize its vision – the engine that drives the entire organization. It is a concrete concept, goal or action standard that connects the knowledge-creation process to the knowledge vision that defined the company's reason for existence. (Nonaka et. al. 2015, 27-29.)

Knowledge is created in the SECI-process of dialogue and practice discussed in more detail earlier. The dialogue phase portrays the synthesis of thought through the meaning it creates, whereas the practice portrays the synthesis of action through reflection instead of just going through the motions. (Nonaka et. al. 2015, 30-33.) Like Simon Sinek has said: "start with why" and continue to the how. The same applies in knowledge creation.

As previously discussed, knowledge is context specific in a sense that it depends on a particular time and space (Hayek 1945). In their theory of knowledge creation in organizations, Nonaka has together with his associates identified the physical or virtual space of interaction as "ba" which means literally "place" in English. This space is important in sharing context and creating, sharing and utilizing knowledge. (Nonaka et. al. 2015, 34.)

Gueldenberg & Helting (2007) came to a conclusion in their writing for Organization articles after going through thoughts by Heidegger (on which Nonaka et al. (2000, 14) thoughts about "ba" are at least loosely based), as well as referring to Nishida and others, that the term "ba" of shared time-space simply refers to the absolute necessities of the process of 'making room' and building ground for new views, hunches and innovative ideas to emerge.

Knowledge assets portrayed in the outer circle of the knowledge-creation process include documents, licenses, databases, patents and other so-called knowledge capital. The assets also include things like brand equity, skills, social capital, organizational structures and systems as well as organizational routines and cultures. Knowledge assets are both the input of new knowledge creation and the output of the knowledge-creation process. Rather than being substances one can purchase, knowledge assets are processed and require a certain amount of knowledge to be utilized, unlike physical assets. (Nonaka et. al. 2015, 42.)

Nonaka and his associates define "Kata" as one of the most important knowledge assets of a firm. "Kata" is roughly translated as the pattern or way of doing things. In this context it refers to the firm's unique process of dialogue and practice. (Nonaka et. al. 2015, 43.) "Kata" usually refers to "how" a company approaches things. Rother (2009) defines it as a pattern that can be practiced to develop certain skills and acquire a new mindset.

Toyota has a "kata" concept that covers both improvement "kata" and coaching "kata" and serves as their knowledge management solution. The four steps of improvement "kata" aimed at the company vision are: challenge, current condition, obstacles and next target condition. In order to make sure everyone approaches the "how" of the company in a certain way, Toyota also has a "how" for their coaching. (Rother 2009.)

The outer layer surrounding the knowledge creation process is the environment which harbors an ecosystem of knowledge. Economic value in a knowledge-creating company stems from interactions within the company or between knowledge workers and their environment of customers, suppliers or researchers. Continuously evolving and multilayered "ba" existing across organizational boundaries is what the ecosystem of knowledge consists of. (Nonaka et. al. 2015, 45.)

Learning models and technologies have been focused on the knowledge acquisition side, although the cultural engagement has been rising in importance. The challenge is building models, practices and technologies that support knowledge creation. The model of investigative learning (Hakkarainen et. al. 1999) was developed to help teachers and students process communal knowledge and create new knowledge, but the model has challenges with abstraction though more social elements have since been added. (Järvelä et. al. 2006, 148.)

The trialogical approach to communal learning is a bid to take the model of investigative learning one step further. The aim is to develop both the theoretical side of learning as well as the need for hands on experimentation. The three learning metaphors include the knowledge acquisition metaphor, the engagement metaphor and the knowledge creation (trialogue) metaphor that has the aim of communal development of socially shared subjects and exceeding previous competence both consciously and in a structured manner. (Järvelä et. al. 2006, 153-154.)

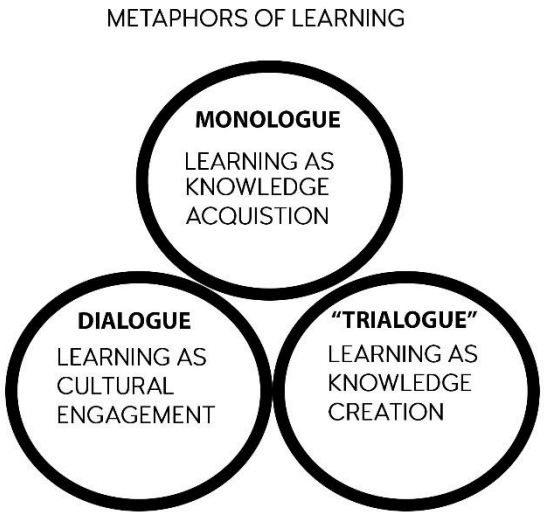

Figure 4: Approaches and Learning metaphors based on Järvelä et. al. 2006, 147.

As pictured above (Figure 4), the trialogical perspective is based on the view that learning is not just individual knowledge acquisition (internal monologue) nor is it only cultural inclusion (dialogue in a social setting) rather it's "trialogical" action which is communal, long-term work around creation and development of shared targets (thoughts, ideas, concrete products). (Järvelä et. al. 2006,147.)

2.3 Value creation

The traditional value chain looks at value creation as linear and transitive. Customer involvement in new service development requires a different approach. In a development project with high level customer involvement, value creation happens interactively among the service developer and their customers. Creating a long-lasting relationship with the customer and redefining old roles makes way for new knowledge creation in social interactions. (Edvardsson et. al. 2006, 36.)

Nishant Shan (U-Create 2019) suggested that marking something creative is a sign of anxiety. He implied that feminists have the answer to anxiety about creativity: begin with ethics and

the care of creativity. Move from value-creation to care-creation. Why is care different from love? Love is measurable: I love you, I love you more, I love you most. According to Shan, a mother does not love her infant, she might but she doesn't have to. She however cares for her infant. Locating creativity in care-making practices is a key to modern day creative practices.

2.3.1 Service dominant logic (SDL)

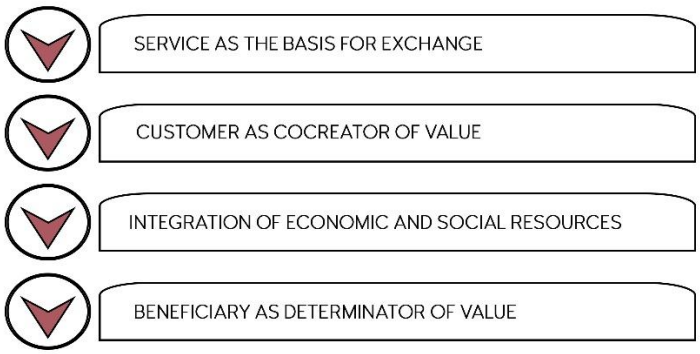

Figure 5: The axioms of service dominant logic based on Lusch & Vargo (2014, 15).

Service dominant logic is based on four axioms that are illustrated above (Figure 5). Lusch and Vargo (2014) add six foundational premises to the first two above named axioms of SDL. The foundational premises that fall under the axiom of service as the basis for exchange are:

1. Indirect exchange
2. Goods as a distribution mechanism for service provision
3. Competitive advance is gained through operant resources
4. "All economies are service economies"

The last two foundational premises under the axiom of customer as cocreator of value are:

5. "The enterprise can only make value propositions"
6. "A service-centered view is customer oriented and relational

Vargo et al. (2008, 145-152) suggest that in SDL the driver of value is either use or context and the process of value creation happens when companies make value propositions through market offerings and beneficiaries continue the value-creation process through the use of the companies' goods or services. The role of companies in value creation is to propose and cocreate value together with network partners and beneficiaries and provide services that support value-creation.

2.3.2 Customer dominant logic (CDL)

"The internal logic of CDL is based on positioning the customer in the foreground in place of the type of offering (product or service) or the system of providers (service [eco]systems)" (Heinonen & Strandvik 2015, 3).

The shift in CDL happens from how customers can be of use to the service provider to how the service provider can make life easier for their customers. In the core of CDL is how value is perceived. Value is not seen as something that is created, rather something that is deliberately formed in mental and behavioral processes during customers' activities and the perceived experience. (Lemmink et al. 2019.)

In CDL value is not seen as something that only happens in the moment of service exchange (value-in-exchange) but also before and after the actual moment (value-in-experience). The scope of value arches beyond the company's reach and will emerge from active environmental factors. These factors are referred to as contexts and are the environments or spaces the service is used in. (Lemmink et al. 2019.)

Research suggests that there are two types of value formation: non-interactive and interactive. In non-interactive value formation, value is provided and consumed – exchanged between providers and customers. (Alderson 1957; Bagozzi 1975; Hunt 1976.) Interactive value formation sees value as something that is co-created during interactions. The most important resources for value co-creation are individual knowledge and skills used during interactions. (Vargo & Lusch 2004.) This thesis focuses on ways to co-create value for services through interactions.

	PDL (Provider Dominant Logic) Value Creation	CDL (Customer Dominant Logic) Value Formation
HOW	active, cognitive & conscious process	passive/active cognitive & conscious/mental & emotional process
WHERE	control zone of company, focal context, scope within the (extended) service	customer's life sphere (out of control), multiple spaces (visible & invisible), scope of value in customer lifetime
WHEN	temporal context defined by company	longitudinal with multiple dynamic time frames
WHAT	relative in a service context, can be measured through traditional research instruments	relative on multiple levels, new methods and instruments needed for study
WHO (VALUE)	subjective, embedded in the object (interaction, service), individual, created in mutual co-creation process led by service provider	personal, embedded in the life of the customer, collective and shared, determined by the customer, formation can rarely be orchestrated

Table 1: From PDL to CDL, based on Voima et. al. 2010, 132.

In the table above (Table 1), Voima et. al. (2010) compare provider dominant logic to customer dominant logic. Much like in the SECI-model of knowledge creation (Nonaka et. al. 2015, 19) value is seen as something that emerges in social context (Lemmink et al. 2019). Value research suggests that "dynamic, collective and shared customer realities" (Heinonen et al. 2013, 112) serve as a context for value formation.

2.4 Synthesis of the theoretical framework

The game industry skyrocketed in net worth and fame to rival the music and movie industry since the rise of video games. Games combine different cultural elements fluidly and provide an escape many are looking for in this digital era. Every startup looking to make it in the industry and create that hit game that carries the company over the next development phase needs the support of the ecosystem.

The Farm League incubator is a knowledge sharing and -creating structure. For this thesis, the practices of knowledge creation by Nonaka et. al. discussed in the theoretical framework were utilized for the purposes of service development of the incubator itself, through a service design process. The ecosystem creates the environment and the incubator provides the means for startups to find their place in the industry.

Knowledge is the key to value creation for young companies. The Farm League service is developed for the customers, utilizing the practices of CDL by trying to figure out how the incubator can make life easier for their startup teams. The service in its entirety is based on the knowledge sharing structures of the game industry ecosystem. Value for the teams is found in experiences that the incubator provides, but that can happen outside the actual service. This is also in accordance to the customer dominant logic.

In order to maximize value creation from the customer's (in this context: incubator team) point of view, the quality and quantity of different interactions in different contexts should be as broad as possible. This depends on the willingness and possibility for different ecosystem experts and community members to help the incubator realize its purpose and help the early stage startups in their mission.

3 Development project

This development project was done in cooperation with Farm League game incubator in Helsinki. The incubator project was new and just starting their operation after running a small pilot with a couple of teams in the fall 2018. This thesis began as the first official batch entered the incubator in January 2019. The objectives were to map out the service and find the key operations from the current service offering as well as finding areas that needed improvement.

3.1 Development project and Aim

The purpose of this thesis was to map out the current operations of the Farm League incubator operating in Helsinki. The goal was to produce knowledge and get valuable ideas on developing the service further. The reason for doing this was to find room for improvement and develop the service further according to the teams' needs. Games Factory was a big part of the operations and activities for the spring batch of 2019 when this thesis started.

Questions that this thesis was trying to answer were: What are some of the common struggles the teams attending the incubator program were facing when they decided to take part in the program? How do the incubator teams hope that the Farm League could help them solve their problems and reach their goals through its services?

Service design tools and methods were used while conducting research in the case company. Service design was chosen because the case company was new and did not have their service quite figured out. There were very few documents available and all of the information was gathered from the customers (teams attending the incubator program) during the research period as well as by talking with the GF CEO and Farm League lead who played a big part in shaping the service.

3.2 Service design process

"Design in its current use in business vocabulary describes a data driven, purposeful intent behind an action, and that intent occurs to affect a specific, measurable business outcome." (Rudkin Ingle 2013, 1.)

"Service design adopts the mindset and workflow of the design process, combining an active, iterative approach with a flexible and relatively lightweight set of tools borrowed from marketing, branding, user experience and elsewhere." (Stickdorn et. al. 2018, 14.)

There is not an agreed upon comprehensive description that would sum up what service design is. Törrönen (Kreapal 2019) comments that human (or in their case customer) centricity, participatory design and co-creation are integral to service design. Kreapal also mentions utilizing design thinking and taking a future forward approach as key elements.

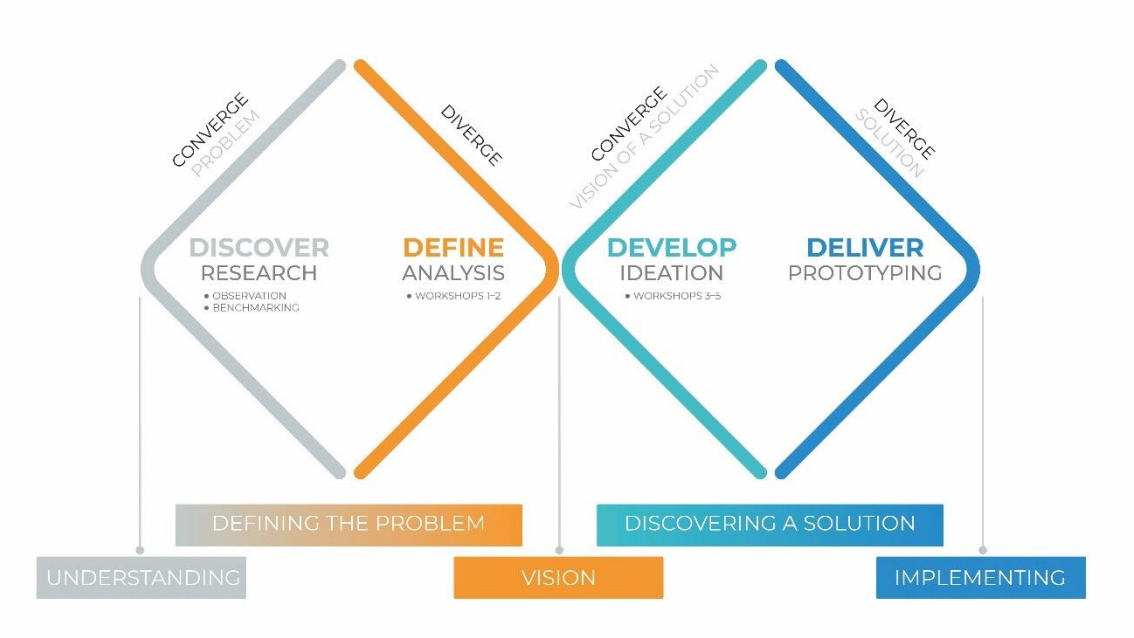

Figure 6: Double diamond versioned from Hellon, Palvelumuotoilu Palo and Kreapal.

The double diamond presented above (Figure 6) is widely used to portray the service design process with each side of the diamonds standing for a specific part of the process. The first diamond stands for defining the problem. Stickdorn et. al. (2018, 14) highlight that each service design project should start with making sure the right problem is being solved. The discover stage is about gaining as much understanding and knowledge as possible through different, mostly qualitative research methods. During the define stage, the information is analyzed to find the relevant content needed, which means narrowing down the research material to get to the stuff that really matters.

Research is needed to develop a solution to any business challenge when design thinking is applied. The first rule is this: “Don’t assume: Ask!”. Design thinking and service design research is a quest to find insights and purposeful in pursuit of information. Research in this context takes the form of asking questions and documenting the answers. (Rudkin Ingle 2013, 17)

The second diamond is all about discovering the solution. After the define stage a vision of a solution should be starting to form. The develop stage opens the diamond to a bout of ideation where possible solutions should be explored freely without judgement or limits. During the deliver stage, prototyping is used to deliver a specific solution, picking the best from the ideas gathered during the ideation.

This thesis focuses on the first diamond of the double diamond – defining the problem to be solved. Since the incubator had very little actual vision, mission, strategy or service proposition written down, the biggest challenge was to explore and research the teams taking part in the operations. This was done by defining what they find most valuable and how the current service is serving their needs.

Service design can be utilized both in creating a whole new service as well as in making an existing service better. While the research method chosen for this thesis is case study, service design methods and practices were used throughout the whole data collection and analysis phase. Service design tools and methods work well with the qualitative approach that was chosen. The aim is to gather understanding by tapping into the experience of current Farm League teams.

Research helps keep team members on the same page and level the knowledge field. A common data set is a good start to making sure everyone understands the business challenge at hand. Customer needs and wants can be turned into insights on which to take action. (Rudkin Ingle 2013, 19.)

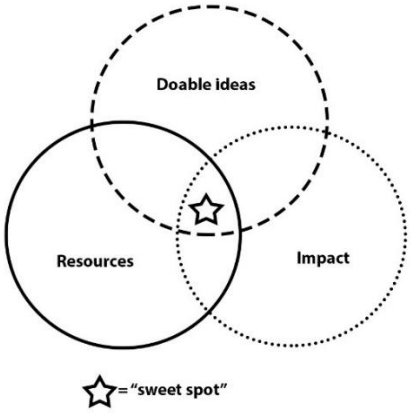

Figure 7: Visual representation of the "sweet spot" in a form of a Venn diagram based on Rudkin Ingle 2013, 10.

The Venn diagram above (Figure 7) shows that entrepreneurial opportunities lie in the "sweet spot", the place where your available resources, doable ideas and potential impact overlap. Finding the business opportunity through ideation and then choosing the best and most realistic ideas for prototyping is key. (Rudkin Ingle 2013, 10.)

Nessler (2018) describes the process as first doing the right thing: finding the right problem to solve or the right question to ask and then moving on to doing things right: solving the problem or answering your questions the right way. Trusting the process is key.

The idea generation phase requires attendees (customers) to describe needs, problems and possible solutions. Benefits or preferences for a new service are gathered in brainstorming or focus group sessions. The existing service can be evaluated by suggesting likes and dislikes and identifying problems the current service does not solve. (Edvardsson et. al. 2006, 27.)

4 Development plan and process

As mentioned in chapter three, the double diamond served as a point of reference for this development project. The focus remained mostly in the first diamond that consists of the stages discover and define. Nessler (2016) refers to the first diamond as designing the right thing. The first diamond can also be about defining the problem, and there are abundant versions of this process. During the final workshops, teams dabbled into the develop stage, which is the first stage of the second diamond that aims to discover the solution. As a result of workshops 3-5 a user persona was drafted and results from the double diamond process passed on as the outcome for the deliver stage. The second diamond Nessler (2016) refers to as designing things right and ends in delivering an answer, product or solution.

4.1 Discover

Nessler (2016) defined the start of any design process as not knowing and finding out what could be. This sums up the beginning of this project perfectly. The discover stage is the stage where different kinds of research techniques are introduced to the process. The aim is to find out as much about the topic as possible and gather insight about the problem (diverging).

The discover stage took up most of the time for this development project. The operations of Farm League were new and there were no other game specific incubators operating in Finland. The idea behind the incubator was mostly in the heads of the Farm lead and GF CEO and there was not really any material to refer to. To find out more about the vision, mission, needs and challenges and find the essential aspects a lot of hands on detective work in the field was needed.

4.1.1 Getting the inside scoop

To get a comprehensive view of the current service structure at the Farm as well as getting to know the teams and their needs better, the first thing that was done for this thesis was observation. The observations took place at the Farm offices at Games Factory from January 2019 to June 2019 and through skype calls during the Farm team meetings in August and September 2019.

Edvardsson et. al. (2006, 20) suggest that customer observation can help identify customer needs that might otherwise go unnoticed. There can be a considerable difference between what customers say and what they actually do, without the customer even realizing it. Observation, sometimes referred to as ethnography, can help catch those unspoken needs.

Observation is a recommended method when doing any kind of development. Useful information can often be gathered easiest by going to the location to observe actual events, rather than by questionnaires or interviews. Observations should be systematically gathered to some sort of a journal. (Ojasalo et. al. 2009, 42.) During the observation period at the Farm, observations were gathered in a Word document during each stay or visit.

The observation period started when the new batch of teams arrived at Games Factory on January 7th, 2019. There were two teams that had already been an unofficial part of the Farm League since 2018. The Farm lead had tasked those two teams with getting the new teams accustomed and making sure the community feeling was maintained. All in all, there were six teams, the lead and a table for observation in the Farm League space in Games Factory property, and three teams started the program remotely. Games Factory offered communal meeting rooms and spaces from the beginning for the teams to utilize for face-to-face interactions and presentations.

The teams had the possibility to choose the space they needed to take for themselves. A suggestion of where they should consider being seated was given. The teams brought either their own furnishings or if they did not have any yet, some seating and tables were provided by the GF crew. No rules were visible for what the teams could bring to the space.

Each team seemed to have a common interest in forming an open community and networking so that they could work together over team borders. There was an obvious spokesperson or main communicator in each team and the other team members either remained mostly silent or backed up the conversation with their own insights.

The Farm League uses Slack as a form of communication. Slack is an application, a collaboration hub used for communicating through conversations in different channels. The Slack group for the incubator was within the Games Factory's workspace so that reinforces the idea of the whole GF space being a big community that encourages open communication and sharing knowledge across teams. "Don't let anything bother you – express it quickly because then it's easier to solve" (GF CEO/Farm Lead 2019).

At the beginning of 2019 each participating team had a planning meeting with the Farm lead and Games Factory CEO to map out what each team's six-month goal was and how the Farm and GF could help them reach those goals. The team discussed their roadmap for the future and biggest weaknesses and fears, as well as going through concrete goals for the program. Many teams mentioned marketing and the business side being their biggest weaknesses, and their goal for the Farm League program being networking with the game industry professionals and making their own game and company known.

At this stage it was mentioned that some files would be collected from the teams for two layers of sharing; some documents with just the Farm Lead and CEO and some with other Farm teams or maybe to the whole GF. It was also suggested that each team member would write down their information and skillsets for building a talent pool for peer support.

There were also discussions in January that the Farm or GF would organize internal show-and-tells, where members would share something they find interesting, like level design or an art project. The presentations could first be shared within each team and then potentially Farm-wide.

At the end of January, a regular interaction flow was discussed between the Farm Lead, GF CEO and the observer. It was agreed that communication between the on-site mentor – the Farm lead and between the teams should be as smooth as possible. It was agreed that a scrum type weekly Farm team meet would be put into action starting in February 2019. News from GF, feedback to the Farm and a short run-through of the week by each team would be on the weekly agenda. The day-to-day interaction between teams and the lead would,

according to observations, need to be mostly initiated by the Farm lead by visiting each team and engaging in conversations, since the teams had very different levels of activity on that front.

Workflow with the mentors was also discussed at the end of January 2019. Speed-dating was to be organized for the teams and mentors monthly, beginning in February. Mentors would also give lectures or organize bigger workshops. A risk that was identified was that some company might not be interesting to any mentor, or would not find the connection with anyone. This risk did not seem severe to the organizers.

First small game testing was organized for the Farm teams in February. Almost every team had at least something they could show – most of it on phones. Some teams were much further along in their development at the time, but everyone was treated equally, and people went around testing the games. One team took part in the testing remotely, but they could only test one of the other teams' games remotely, since only one was downloadable in App Store.

Mentor speed dates started on February 27th , 2019. The mentors seemed to have very little idea of what was expected of them or what the speed date would look like. Only one remote team had travelled to Helsinki for the event. All the in-house teams were present with varying compositions. The Farm lead had an opening chat and informed that mentors would have 10 minutes in each table before switching. One of the Farm teams asked if the mentors could introduce themselves, so every mentor said a few words. There were more mentors than teams in the event, so it was suggested that mentors could grab a bite if all the teams were already occupied for the round.

Since there were more mentors than teams, it would have been beneficial to "pair the mentors" and have a bit of a longer time, or think of another way so that the mentors wouldn't just be standing around. Some, if not most, of the mentors did this instinctively anyway, it seemed. Another thing to consider would have maybe been splitting the more active teams into two and increasing the number of "conversation spots" this way. The team logos or names could have been set up on the tables.

The mentors seemed to have most trouble in how to move from one team to another, since it was not organized in any way. Some teams had material to show on their computers, some just chatted with the mentors, some would have had a trailer or something to show but forgot to bring a laptop and some teams drew mind maps and other images. The teams also had differences in approach, with some teams having the team leader do all the talking, and some teams being more active in participating. Mentors that were left to hang around without a team to talk to had different approaches to the "lost time"; some joined another mentor in the table, some talked with the Farm league and some seemed a bit frustrated.

By March it seemed most of the teams would gather around when there were workshops or meetings, but other than that attendance seemed very optional. And some of them seemed to be more invested in the Farm community and showing up than others. The GF executives were having talks with the teams about the effects of restructuring the operations. The CEO wanted to have a repository for people visiting GF to able to showcase games being built right away. There was also a request by the teams to have a Google Drive with mentor contact information and expertise listed.

Preparations for a new batch of Farm teams started already in March, and a promotional event was planned at the end of April. The target was to take in five new teams. One team from Metropolia was also rescued to the Farm space for the spring, but it was not an official member in the program. Demo days were planned to be organized at GF every last Friday of the month for teams residing in the building to be able to get feedback on their builds.

A branding workshop, which had everyone focusing on putting their company's mission, vision, strategy and values into words, was arranged at the end of March and was highly appreciated by all the teams. Teams had to also think of benchmarks, put together user personas, think about their competitive environments and defining their benefits. This workshop was also named as one of the best ones also by 2nd batch teams in October 2019.

A pitch deck workshop was organized at the beginning of April by the Farm Lead and the Games Factory's Chief Operations Officer. There were only four teams present, one of which came in late. The workshop had some detailed ideas for sharing the company story and building on it. In April team members also had their pictures taken by the GF Chief Marketing Officer for marketing purposes. Games Factory shared some of the Farm teams' stories on social media during the spring.

In May it was announced to the teams that Games Factory had run into financial troubles and that there would be major changes in management and spaces. Teams were told that the companies that already had spaces rented out at the factory would be able to stay, but there were no guarantees for the Farm. Maria01 management had power over the use of the spaces. Games Factory operations would likely be rearranged and made into a non-profit organization (NGO) with delegation work and events playing a bigger part.

Some of the teams moved to new spaces at the Factory or to XR Center, anticipating the space changes. The rest of the teams were informed that they would likely have to move downstairs next to the event space. Teams were busy updating pitch decks and talking with investors – almost everyone was struggling with financing. In addition to these subjects most of the focus was on game development. During the spring all of the teams were most interested in finding more developers to work with them, while other sides of game development and business were easier to handle with the existing resources.

The new batch of Farm hopefuls did their pitches in early June 2019. There were not as many applicants as in the first batch, so all of the teams had a better possibility of getting in. The Lead had decided that remote teams were hard to keep engaged and was looking to take in as few as possible.

The new teams were chosen with only a couple left behind, and were able to move into the Farm early in August. The teams only had a short stay at the Factory where the Farm had already been moved to the space next to the event arena by then before having to move out of the Factory space for the time being. A space for the teams was organized from the Newsec building in Ensi linja.

The Farm lead was extremely busy most of the spring due to GF having troubles with their operations and juggling her role between the Farm, BGI and Metropolia. Outsourcing jobs could not be offered to the teams during the spring or fall of 2019 due to lack of resources. During spring and fall teams were encouraged to follow and cross-promote each other to gain visibility – it was not documented how successfully. The third batch of teams was postponed due to uncertainties with the space and funding.

Observation is a great way of gathering data and striking up conversations that could otherwise not happen. During this observation period it became evident that the same topics were discussed in the Farm meetings, in casual conversations and during different workshops. The Farm concept was very loosely put together and thus flexible and open to quick tweaking. New practices were adapted during the observation period based on feedback from teams, stakeholders and mentors. Challenges stemmed mainly from the financial strain of doing semi-nonprofit business and trying to make ends meet the best way possible for everyone involved.

4.1.2 Comparing incubators

Cross-case research is always more representative of a larger population since single case study is one example within a larger phenomenon (Gerring 2007, 42-43). In this thesis benchmarking has been used to provide evidence from similar units in the game incubator category.

For this thesis, ecosystem comparison was done by getting familiar with the Danish Game Hub and Swedish Sting. The web presence of both hubs was studied, and the leads of the incubators were interviewed by email. Similarities and differences were discussed. Since doing these interviews the Farm has continued collaboration and taken advice from both parties in how to follow up on the development of the teams.

Incubator	Sting, SWE	Game Hub, DK	Farm League, FI
Duration	12 months Incubate OR Accelerate, later stage support	12 months Incubation, 12 months Growth & validation (start up, accelerate), later stage 12 months	New batch starts every 6 months, old teams can choose to stay with the Farm

Table 2: Incubator duration

The duration of the incubator program presented in the table above (Table 2) for all three incubators stretched from 6 months (1 batch at Farm league) to 3 years possible stay that the Game Hub offers with their study program. The average time spent at an incubator stage is around 12 months, after which the startups might basically stay with the incubator but get services suited for acceleration of their business.

Incubator	Sting, SWE	Game Hub, DK	Farm League, FI
Office Space	A House, free space for first 5 months, game teams in same office with other startups -> discounts for co-working spaces, A House +6 months for a fee	Incubatees required to stay at Game Hub office building, tables and office rooms for a low rent.	Tables for rent at the Games Factory building for a low fee, also possibility to rent rooms from the Games Factory or Maria01 premises

Table 3: Incubator office space

As the table above (Table 3) shows, the interviewed incubators tend to offer either free or low-cost office spaces for their teams at least for the duration of the program. Sting offers teams free space with other non-game related companies for the first 5 months, after which they get a discount on co-working spaces. Game Hub offers low-cost rooms or tables for rent and requires the teams to stay at their office. Farm League also offers remote services, but has low-cost tables for rent. Farm teams had to either move office spaces with the Farm League when Games Factory closed, or search for a different office space.

Co-location was a practice that all the incubators have chosen for their teams. While Sting startups stay in a space with teams from a range of industries, Game hub and Farm have chosen to offer co-location among other game teams. “Co-location leads to the sharing of expertise amongst residents” (Crogan 2015, 19).

The research made by Crogan and his colleagues for the Good Hubbing Guide suggest that co-location provides a milieu for moral support, social networking and professional development through sharing expertise. Co-location also helps link the residents to the wider community of game makers and other relevant contacts, which provides a possibility for spontaneous encounters. The critical mass built by a physical space that hosts several teams also opens up access to a wider range of commercial, creative and community networks, people and organizations. (Crogan 2015, 18.)

Incubator	Sting, SWE	Game Hub, DK	Farm League, FI
Business side	How to you build an efficient organization with a well-motivated team, leadership, financing, building your minimum viable product, finding product market fit, creative low-cost marketing and growth hacking etc.	"Startup evening course" by Dania academy on how to run a company, business related mentoring by Game Hub is also available	Business basics workshops that teams can attend according to their needs: mission, vision and strategy, marketing, financing, outsourcing

Table 4: Incubator business education

The business education side of the incubators used in the benchmarking is compared in the table above (Table 4). Sting has well-thought-out building blocks that they offer to the teams when it comes to business education. Game Hub also has a specific course on business basics that the teams can take, which is offered as an evening course after working hours. Farm League offers business basics workshops that they put together according to requests. The workshops are either held by the Farm Lead or by an outside specialist. During the observation period there was no plan on which topics would at least be covered during the incubator period, rather an "ask and you shall receive" sort of approach.

Incubator	Sting, SWE	Game Hub, DK	Farm League, FI
Workshops	Selectable, same for all startups. No game workshops, but 4-6 meetups per year	Template-based teaching and bespoke consulting, depending on team	Business Basics workshop (week 1, Farm Lead), Masterclass workshop (week 3, a specialist mentor)

Table 5: Incubator workshops

The table above (Table 5) shows how the three incubators arranged their workshops. While the Farm League took a timetable approach for the workshops, switching between business basics and usually game specific masterclass workshops, Sting offered the same workshops for

all the startups with the addition of 4-6 game specific meetups per year with industry professionals. Game Hub organized workshops in pretty much the same way as Sting with template-based teaching, however bespoke consulting was also available, depending on the teams' needs.

Incubator	Sting, SWE	Game Hub, DK	Farm League, FI
Mentoring	Business coaches, recruitment team, financial support, marketing & PR support, expert coaches and game industry partners	Mentoring and monitoring done by fulltime employees with background in the industry and knowledge on running and starting a company. Also, external mentors & speakers are used.	Speed date with selected industry mentors (week 2), Company status update & hands-on mentoring with the Farm lead (week 4)

Table 6: Incubator mentoring practices

The table above (Table 6) sums together the mentoring practices of the incubators used in benchmarking interviews. Sting offers an impressive array of different professionals at the disposal of the teams. They also have connections to outside partners in the game industry. Game Hub also offers the expertise of in-house employees to the teams, as well as using external mentors and speakers. Farm League relies on the network of volunteer mentors they have gathered from industry professionals and businesspeople. The Farm lead also has an extensive background in the game industry and so do Games Factory resident teams and the few employees that remain. The close proximity and collaboration with Maria01 offer possibilities for business mentoring.

Incubator	Sting, SWE	Game Hub, DK	Farm League, FI
Biggest learnings & Best practices	Focus on the teams	Not everyone is cut out to be an entrepreneur. Most startups do not spend enough time on sales activities and marketing, "being allowed to do my own thing" does not work, ambition to make money and make a viable product is needed	Build a strong network of mentors Create partnerships with the public sector to secure your operations with limited finances

Table 7: Incubator learnings

The biggest lessons that the incubators had gained from their operations and working with the teams are presented in the table above (Table 7). When asked about the most important thing learnt, Sting lead kept it short and sweet by urging to focus on the teams. Game Hub went into more detail reminding that not everyone is cut out to be entrepreneurs and that especially for game startups "making games" can overwhelm the business side, so there is the need to make a viable business case in order to survive in the market. For Farm League the network of mentors and other partners seemed to bring most value.

Incubator	Sting, SWE	Game Hub, DK	Farm League, FI
Common struggles within teams	Funding, product market fit, understanding their metrics - how can they measure if they succeed or not, prioritizing their time towards the OKR's (Objectives & Key Results) they set up in collaboration with their coach.	The transition from being "craftspeople" to being "businesspeople". Having the ambition or goal to build a business.	Funding, marketing, time management - prioritizing time towards the OKR's (Objectives & Key Results), product market fit (where to find customers/players)

Table 8: Common struggles

The last table (Table 8) gathers the struggles that the incubator leads felt were the most common within the teams. Every incubator used in the benchmarking seemed to identify similar problems. The transition from being "craftspeople" to "businesspeople", so focusing on all the other aspects of business and startup life except the part where you make a cool game. Funding and marketing seem to be the two most common struggles for all the aspiring teams.

4.2 Define

The define stage is the second stage of the double diamond process, wrapping up the first diamond and deriving the key findings gathered during the discover stage (converging). The synthesis of information through analysis helps bring out insights, themes, opportunity areas and a HMW. The goal of this stage is to find out the area to focus upon. (Nessler 2016.)

4.2.1 Workshop 1: Understanding connections

The goal of the first workshop was to identify and visualize the different partnerships and networks formed around Games Factory and the Farm incubator. Identifying stakeholders and partner networks is particularly important for an incubator that aims to help teams accumulate knowledge about business and games in order to create value in their service. Knowledge creation is not a solo effort, rather a group activity tied to a certain moment.

The definition of a stakeholder according to Cambridge Dictionary, is a person like a customer or an employee, even a citizen who is involved with an organization. Involvement means they an interest in its success as well as some responsibilities towards it.

Participants for this workshop were the Game Factory CEO at the time and the Farm League lead. The participants had the shared knowledge of different partnerships and the connectivity between the incubator and the whole of GF.

I chose participatory drawing as the visual method for this workshop. The physical act of drawing on a paper is an easy and straight forward method for visualizing this kind of data involving clusters, partners and connections.

Drawing is a more generative way compared to digital tools since it requires drawing a world into existence rather than selecting a piece to record. The physical act of creation involves a cognitive process and the time given to reflect on the response encourages conceptualization and contemplation. (Literat, 2013.)

- One day workshop at Games Factory
- Participants: the CEO of Games Factory and the Lead of Farm League incubator
- Facilitator: Author of the thesis
- Goal: To visualize the partner network around Games Factory and the Farm incubator and analyze the quality of those connections.
- Use: Service Design thesis for the Farm League incubator aiming to shine light on the current service and offer suggestions for improvement.
- Methods: Heaven & Hell, participatory drawing
- Duration: approximately 2 hours

The workshop started with an orientation into partnerships. The method is called Heaven & Hell, in this workshop dream partner vs. nightmare partner was used instead. This workshop was also used to give the GF and Farm leads an idea of what kind of methods would be used with the teams in coming workshops.

The participants were instructed to write down their own thoughts on what a dream partner/partnership would have or how it would be, and do the same for the absolute worst case of nightmare partnership.

The thoughts were written down on a flap board and discussed. The participants evaluated where they were now in the scale and where they would like to be during next year (2020). The results could be used to regroup and evaluate if the partnerships had been moving in the right direction.

The final goal of our workshop was to create a visual representation of the partner network around Games Factory and the Farm League. Participatory drawing was used as a visual design method in this workshop.

Participants were encouraged to use drawings like different shapes or more representative drawings as a form of visualizing the partner network of Games Factory and The Farm League, instead of using words.

Both participants started with drawing a representation of Games Factory and its connection to the Farm (2 minutes).

Next, they were asked to draw out the different kind of umbrella concepts or actors which the partners represent (10 minutes).

After that the participants drew all of the partners and their connections with each other, the Games Factory and the Farm.

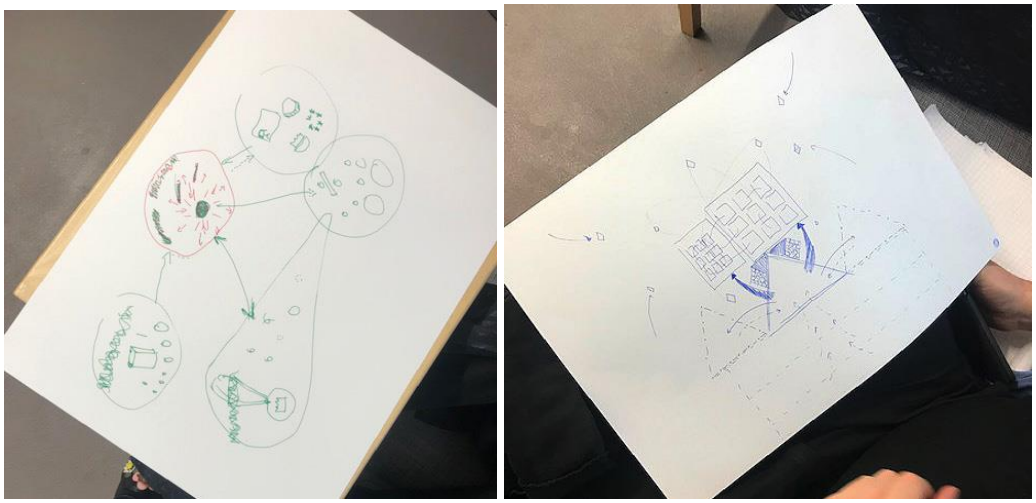

Figure 8: Pictures drawn by participants to represent the stakeholders.

Above as pictures (Figure 8) are the drawings each participant made to represent their view of the different stakeholders and partnerships. Participants did not see each other's drawings or interact before this part was over. After each of the participants had finished drawing, we compared and analyzed the visual representations they had drawn, and they made a ”final” version together based on the two.

They were allowed to add some words to the final drawing for clarity. The significance and role of partners can be easily represented visually, as well as the network they create around Games Factory and Farm League as a part of it.

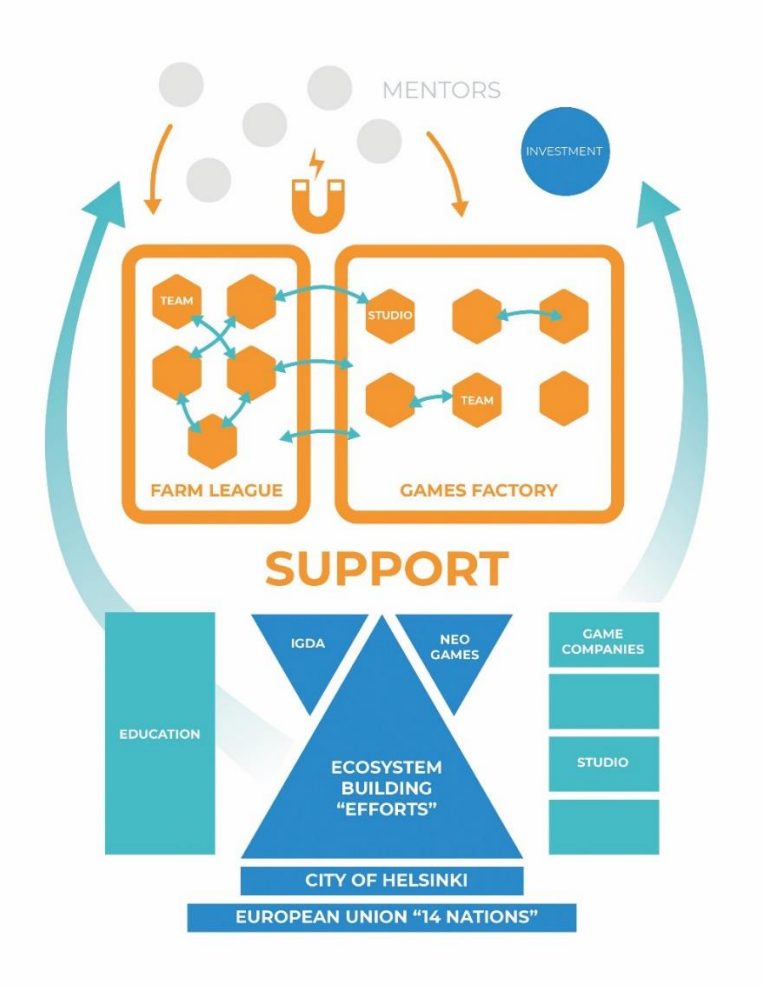

Figure 9: Sketch based on the final collaborative drawing by the participants

A digital sketch was made by the author of this thesis based on the final collaborative drawing of the participants (Figure 9). The first thing that could be learned is that the games industry is a network business, and the circles in Finland are small – everything and everyone is connected. On the bottom right are the Game studios operating in Finland. The triangle represents the foundation, which is City of Helsinki, the object on the right represents Neogames which is an umbrella organization of the industry and other similar big players, on the left are other partners from the industry or connected to it.

Farm league is the smaller cube and the circles represent the Farm teams, the bigger cube is Games Factory with the hexagons representing the companies operating within it, and above them are floating circles which are attracted to the Factory by word of mouth – they can be industry mentors, angel investors or other connections.

The foundation from EU and City of Helsinki is essential for funding and support to the Games Factory as an industry showroom and embassy. Strong connections to the Finnish games industry, educational partners and investors or funds like FIBAN, Business Finland and others, need to be respected and nourished.

The workshop was a success and the drawing made by the participants can be used to dig deeper into the different kinds of partnerships and to find ones that maybe need to be established or nurtured further.

Lessons gathered through this workshop were related to the visual methods. People need to switch their brain into 'drawing mode'. One participant found it easy, but the other one instantly started dribbling words into a mind map.

To help participants get into the right mindset I would introduce a short orientation into drawing at the beginning of the workshop so that people would feel comfortable. Like drawing yourself in a limited time over and over (2 minutes, 1 minute, 30 seconds, 20, 10…).

Setting clear boundaries and making sure everyone understands the focus and what we are trying to achieve is a must. Analyzing drawings after they are done is extremely important to get into the brain space of the participants and truly understand what they are portraying.

Judgement of your own or others creative talent needs to be left at the door. Drawing is a great way of visualizing connections and was definitely the right choice for this project.

4.2.2 Workshop 2, Finding out the best- and worst-case scenarios

The second workshop was intended to consist of the Dream and Nightmare method as an orientation followed by the value proposition canvas workshop. Due to the time restraints of the startup teams, the workshop was decided to be split in two, and this workshop only had the Dream and Nightmare Farm exercise introduced to the participants.

The Dream and Nightmare exercise was conducted utilizing the me-we-us way of working, which ensures everyone has their opinion voiced by having people first work individually for a minute, then in pairs or small groups and finally has the whole group come together and the facilitator sum everyone's thoughts up on a whiteboard or similar format. (Ideapakka 2019.)

- 1-hour workshop at Games Factory
- Participants: Farm team members from 5 different teams (1-2 people/team)
- Facilitator: Author of the thesis

- Goal: To identify the absolute best and worst qualities or attributes the Farm could possess, to see how the Farm compares on the scale now and what needs to be done to move closer to the Dream.

- Use: Service Design thesis for the Farm League incubator aiming to shine light on the current service and offer suggestions for improvement.

- Methods: Heaven & Hell (here: Dream & Nightmare), me-we-us

The workshop did not require for the whole or most of each team to be present, since it was more about individual attendance and feedback. It was requested that at least one team member of every team that had the possibility would be present. In attendance were team members from five of the teams: YEEA Work, Critical Charm, LunarByte, Period of Play and Twisted Arc. The workshop started right after the weekly Farm meeting on May 31st 2019.

The workshop started by going through the method. The goal for the workshop was to explore what an absolute dream Farm incubator would be like and what the absolute nightmare counterpart might be. The initial idea of the exercise was first explained, and then everyone was asked to take a pen and paper and spend a couple of minutes by themselves thinking about the absolute dream qualities they wished the Farm would have, then spend a couple minutes wondering what a nightmare situation could be like.

The participants were then split into smaller groups by doing a count to three so that each group would have individuals from different teams. The groups were then asked to go through all of their individual thoughts on both the dream and nightmare Farm they had imagined, find some similarities and different ways of thinking and then write their group's thoughts down on a piece of paper with both sides represented. The papers with a dream and nightmare side drawn on the opposite sides had been hung on the walls at the beginning of the workshop by the facilitator for the groups to make use of.

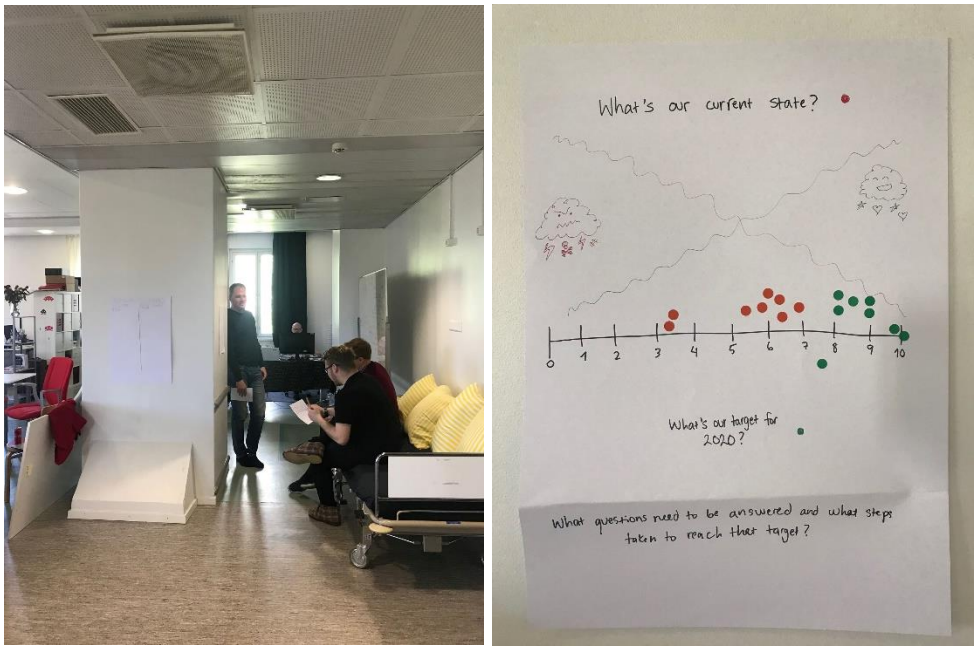

Figure 10: Teams working on their dream and nightmare attributes, Current state/future chart.

The way the teams were working together as well as the chart are pictured above (Figure 10). After the smaller groups had their thoughts written down, each participant got handed a green and a red sticker by the facilitator. A graph with a scale of 0 to 10 (0 being absolute nightmare and 10 being the dream) was revealed, as pictured above. Everyone was then asked to place the red sticker to where on the graph they saw the Farm was now and place the green sticker where they hoped it may be in a span of one year.

The average grade given for the current state of the Farm was 5,5. The participants hoped that within a year the Farm service would reach an average grade of 8,7. After looking at the graph together and determining where the participants saw the Farm service falling on the chart now and where they would like to see it be in a year, a regrouping was done.

The thoughts written down in smaller groups were presented by the groups, and gathered together on one big whiteboard by the facilitator to represent the participants common ground for what the nightmare or dream might be. Questions needing to be answered and steps needed for the Farm to move towards the goal everyone had set for the year 2020 were then discussed.

4.2.3 Analyzing data, finding key takeaways

All of the data gathered during the discover stage was qualitative data from observations, incubator interviews and conversations had at the Farm. The data analysis was made easier by the fact that all of it was already in writing, either in emails, on workshop sheets or in the word document where observations were gathered.

During the define stage, observations made at the Farm and during events, insights gathered from fellow incubators and thoughts gathered during the first workshops were gone through and defining factors written down. By comparing the qualitative data gathered, similarities were identified, and common topics taken to be looked at further. Forming word clouds, creating lists of words, and comparing notes helped analyze the findings.

The essential building blocks of the incubator service were already present according to the findings, but the service was still in the phase of developing and forming. The define stage shed light on the fact that doing things right has a huge meaning, even if you are essentially doing the right things.

The define stage helped crystallize the things that needed to be investigated further and find the topics that could form the basis for ideation during the next stage of the process. These topics were value creation, exploring the user of Farm services in more detail and diving deeper into the topics that form the service offering and how they should be developed.

4.3 Develop

The third stage, the first side of the second diamond is the develop stage. During the develop stage, ideation is being done to find potential solutions to the problems at hand and not limiting the ideas (diverging). The develop and deliver phases of the second diamond help make sure that you are designing things right. (Nessler 2016.)

4.3.1 Workshop 3, Finding the value

In workshop three teams continued to dig deeper to the needs and expectations for the Farm services, in order to make sure that the proposed service of the incubator matched the needs of the teams. The participants worked together with their teammates in creating a value proposition canvas that would highlight the goals of their team and the things stopping them from achieving them, as well as coming up with things the Farm incubator could offer to help teams out and maximize the positive outcomes.

The value proposition canvas is a tool that help visualize, design and test new products and services. The canvas consists of a customer profile and a value map. In the customer profile, the customer jobs that they need to get done are listed. The jobs can be functional, social or emotional. The customer profile also highlights customer pains (negative outcomes like

frustrations, risks they try to avoid), and customer gains which describe how customers measure the success of a job that has been done well (positive outcomes like concrete benefits). The map helps shed light on the customers that the value is being created for. (Strategyzer 2019.)

On the value map, products and services that the value proposition of a company builds on are listed. The pain relievers are things that those products and services offer to eliminate or reduce the pains customers care about. Gain creators, on the other hand, outline the things that can maximize or create benefits that customers expect or desire. The idea is to find a fit between the customer needs and the services offered to them. (Strategyzer 2019.)

- 1-hour workshop at Games Factory
- Participants: Farm team members from 5 different teams (1-2 people/team)
- Facilitator: Author of the thesis
- Goal: To map out the jobs teams need to get done, and things helping or hindering them in achieving those goals. Thinking about things the Farm could offer to help the teams out.
- Use: Service Design thesis for the Farm League incubator aiming to shine light on the current service and offer suggestions for improvement.
- Methods: Value proposition canvas

Since the canvas was not familiar to any of the participants beforehand, each section was first gone through together along with questions that might help thinking and ideation. Due to the time restraint each team had 5 minutes to think about things for each section.

Blank value proposition canvases were handed out to everyone on an A4. Blank A3 papers were also handed out, and some teams chose to write down their answers to those instead to get a bit more room.

Teams were spread out across the room working with their own teammates and questions were answered by the facilitator on a need-to-know basis. All of the teams needed some extra time to fill out all the sections, so the workshop ended with the facilitator agreeing to collect information from all the individual canvases to get a collective opinion.

The canvas proved to be somewhat difficult to get familiar with within the timespan of one hour, and some of the teams had mixed the customer profile and value map to both be about their team. Feedback was collected on the spot, with the request to go through sections one

by one in these kinds of exercises after each 5-minute round, so that the purpose would still be clear when starting work on each one.

All in all, teams worked together intentionally and put in the effort, even though they had never used this tool before. This was a rather unconventional way of using the value proposition canvas to begin with, since the actual "end-customers" were filling out both the customer profile and the value canvas themselves. The teams' answers were combined into a collective value proposition canvas that can be found in the appendices.

4.3.2 Workshops 4 & 5, Exploring the customer and evaluating the service

The final two workshops were arranged at the Farm League's new temporary office building at Ensi linja on October 11th and October 18th. Five participants from three teams were present in the fourth workshop, two of the teams being new from the 2nd batch (Clover Creek and Harhama) and one team from the 1st batch (StageZero). Four participants from three teams were present in the final fifth workshop, one of the teams being new from the 2nd batch (Lockpickle) and two teams from the 1st batch (Critical Charm and Twisted Arc).

The empathy map was created at XPLANE by Dave Gray as part of a human-centered design toolkit and was first known as the "Big Head Exercise" because of the user/customer being often portrayed in the middle of the map as a head. The tool helps create shared understanding and empathy towards other people, and is often used as a basis for user personas at the beginning of a design process. (UX Booth 2019.)

Susan Dray and David Siegel argued in an article for ACM Interactions magazine that empathy maps are a user experience (UX) shortcut and should not be treated as a tool that creates empathy and deep understanding. Using a sequence of empathy maps to describe the user during different stages of their journey would create a more holistic understanding. (Dray & Siegel 2019.)

In this thesis the empathy map has been used to dive a little deeper into the thoughts of the actual Farm teams and how they view the service and the industry around them. Two different workshops were held using the same tool with the second team building on the first teams' answers.

- 2-hour workshops at Ensi linja
- Participants: Farm team members from 3-4 different teams (1-2 people/team)
- Facilitator: Author of the thesis

- Goal: To identify the characteristics of a Farm team member/incubator participant, to ideate around the existing Farm timetable/process
- Use: Service Design thesis for the Farm League incubator aiming to understand the current service in more depth and offer suggestions for improvement.
- Methods: Empathy Map, Ideation
- Duration: approximately 2 hours

The fourth workshop started with a short recap of what had been done in the previous workshops. A summary of the value proposition canvas filled out by previous workshop attendees was handed out to the participants for reference and inspiration if needed.

The goal of the workshop was then shortly gone through and the empathy map as a tool was presented. None of the participants were familiar with the empathy map. One person, who had attended the value proposition workshop, asked that each section would be gone through individually before the ideation, since it was hard to remember what the goal was for each step if the map was only gone through once as a whole.

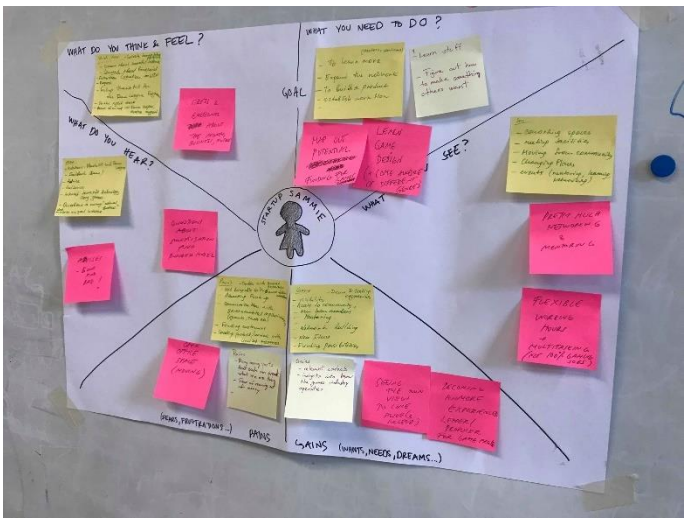

Figure 11: Empathy map work

The empathy map used was a blank canvas with “Startup Sammie”, an androgynous incubator participant portrayed in the middle like pictured above (Figure 11). For these workshops no background/demographic information for “Sammie” was collected from the participants. Participants were encouraged to think about the questions from their own perspective, since they in this case represented “Sammie”.

As a tool, the empathy map is widely varied but usually consists of four to six sections or quadrants that are labeled with things the user is doing, seeing, hearing, thinking and feeling. Pains and gains are also often included in the empathy map. (UX Booth 2019.)

Pains and gains were familiar concepts to participants who had also been in the value proposition workshop. The value proposition canvas put together from the answers of participants in that workshop was handed out to be used as inspiration.

The approach of me-we-us was utilized in this workshop as well, and each participant was first asked to individually write down thoughts on post-its about each section of the empathy map. The map was gone through section by section with 2 minutes reserved for answering each.

The participants were then split into two groups, so that participants from the same teams were not working together. Participants were asked to go through the things they had written on their post-its during individual work, and then form a common understanding of similarities and relevant thoughts, and write them down on a new set of post-its, that were then glued to the empathy map on each segment.

The empathy map answers were gone over together with the whole group by the facilitator. Similarities were spotted and different ways of approaching each segment appreciated. After making sure everyone was satisfied with their answers and had nothing to add, it was agreed that it was suitable to move on.

The fifth and final workshop was also arranged at the Farm League's new temporary office building at Ensi linja on October 18th. For this final workshop, the empathy map filled out by the previous teams in workshop 4 was used as a base for further development. None of the participants had previous experience with using an empathy map, so the workshop started by going through the method briefly. Since there were only 4 participants, each one of them was instructed to look at the map from their personal point of view, as well as from a general "incubator participant" point of view.

Post-it notes and pens were handed out to everyone and the empathy map was gone through section by section, with each participant commenting their thoughts and then writing them down to be added to the map. Answers from the previous workshop were used as a guide, as well as inspiration, to add on to or to take the analysis to a deeper level.

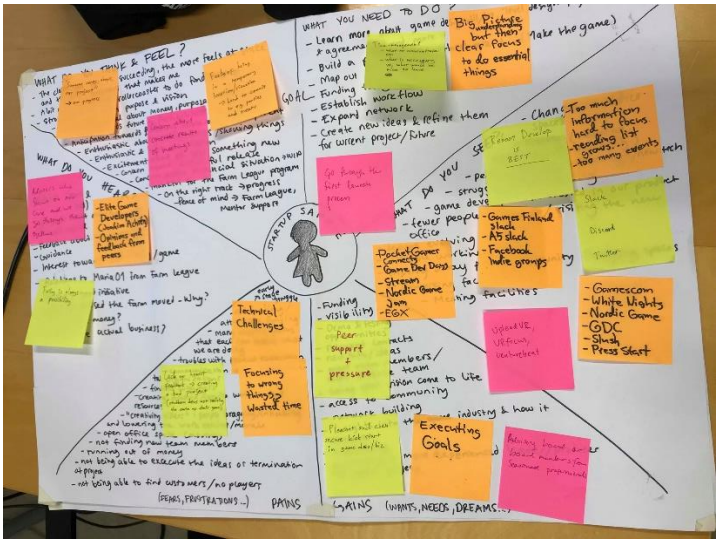

Figure 12: Empathy map add-ons by workshop participants.

Each section of the empathy map pictured above (Figure 12) was gone through together before ideation, to make sure everyone understood what was meant by the headers: need to get done, see, hear, think and feel, gains and pains. Participants worked well together, throwing around ideas and agreeing who writes them down without much intervention needed from the facilitator. Ideas were written down on post-its and added to the canvas. A collective empathy map with the team's combined answers can be found in the appendices.

The workshop continued by going through the empathy map answers together, and then moving on to the timetable.

The second exercise utilized a timetable that the Farm lead had taken into her toolbox for the second batch of incubator attendees. The timetable was designed to bring some structure into the teams' calendar, so that everyone had a rough idea of what was going to happen during the fall period of 2019 Farm League. The timetable originally had only the changing weekly events scheduled, but for the workshops the facilitator chose to add the weekly meeting to the timetable, since it's a recurring event that takes up the teams' time each week.

Week 1	Week 2	Week 3	Week 4
Weekly Farm meeting Company status update & hands on mentoring with the Farmer	Farm meeting Mentor speed date	Farm meeting Masterclass workshop (a specialist mentor)	Farm meeting Business Basics workshop with the Farmer or a specialist mentor if required

Table 9: Timetable adapted from the original list

The timetable pictured above (Figure 13) was a rotating 4 week-calendar with specific events intended for each week. Every week the teams have their 1-hour Farm team meeting (on Friday afternoons), week 1 would have the company status update and hands-on mentoring with the Farmer, week 2 mentor speed dates, week 3 masterclass workshop by a specialist mentor and week 4 the business basics workshop by the Farm lead or a specialist mentor.

The timetable was originally just a list of the weekly circulation. It does not specify what type of workshops are intended for weeks 3 or 4 of the rotation, since there was no pre-set plan made at the time of these workshops, although some common themes had already formed.

The participants were asked to work with their team for the second assignment. They were encouraged to look at each of the scheduled events separately and think about "what works" and "what could be made better". They were also asked to think about themes for the workshops – what workshops had they already been to and what they would like to see in the future. It was also left to their consideration to think how useful they felt each of the separate scheduled events felt from their team's perspective.

Post-its were used again for this exercise, and the timetable was presented on an A3 paper that had been prepared in advance. Each section of the timetable was gone through in order and after that, everyone was welcome to bring their post-its to the timetable in any order they pleased. Teams were given a few minutes to go through each section.

Once everyone had finished writing, each team was asked to go through their ideas and thoughts. Other teams were asked to chime in if they had anything to add or had new ideas pop into mind. Some sections on the timetable gathered more thoughts than others, but overall the output was well balanced.

The participants had the timetable filled out by previous workshop participants as inspiration, but for this final workshop the decision was made to deconstruct the timetable into individual segments for each event or subject.

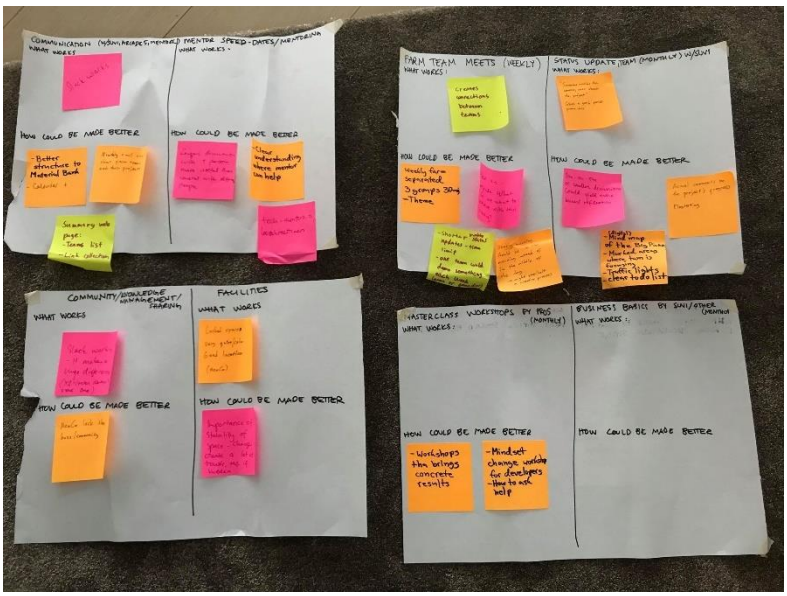

Figure 13: Deconstructed timetable and add-ins

In addition to the contents of the original timetable, there were subjects added to the deconstructed exercise like pictured above (Figure 14). The subjects were things that had risen in importance during the previous workshops and included: communication, community/knowledge management and facilities.

Each section was divided into half with “what works” at the top and “what could be made better” at the bottom. Participants were asked to work individually and write their thoughts down on post-its. The ideation moved forward section by section, and participants continued to work together by speaking their thoughts out loud before writing them down, which was allowed by the facilitator. Some of the topics sparked a lot of ideas and conversation, while others were passed quicker. The answers were combined with the ones from the previous workshop, and a timetable with the team’s suggestions is in the appendices.

In the previous workshop the actual subject matter of the workshops had been passed quicker, so in this second workshop more emphasis was put on that part. Participants had already expressed earlier in the workshop, that knowing how to focus on what they need in the information overload is hard, and this showed in the part where they were trying to think of actual subject matter. Some nice additions were however made to the previous materials, and the group worked together going through the workshops they remembered attending.

4.4 Deliver

The potential ideas and solutions produced during the develop stage need to be evaluated and narrowed down to implementation. This can be done by doing rapid prototyping with simple builds that get tested and results analyzed. Through iteration a final proposal, product, answer or solution takes form. (Nessler 2016.)

The teams came to the incubator with very different backgrounds, expectations and understanding about what the Farm could offer or how they wanted to be helped with their start up mission. Some teams had considerably deeper understanding of the business side while some were more familiar with games and the industry. Each team had a real passion for making games and building a viable business.

Ideas gathered during the develop stage workshops were in writing since post-its were used during workshops to gather thoughts from each individual. Ideas were grouped and categorized according to previous findings and key topics gone through again. The findings were similar to earlier discoveries and the key points of improvement remained the same. The develop stage offered more concrete development ideas and a deeper look into how the teams saw their role and expectations in relation to the incubator.

Figure 14: Dream Farm attributes

Above (Figure 15) is a word cloud made based on the teams' answers during the dream and nightmare farm workshop. The nightmare attributes can be found in the appendices. Already in this early stage of research, things that rose in importance were the same things the teams expressed throughout the research period. During observation, conversations and workshops common struggles that the teams expressed needing help with were found to be information overload, funding, building valuable connections and business skills.

4.4.1 Information overload

In workshops teams expressed that being a newcomer in the games industry, it can be hard to understand the big picture and find a clear focus to do the essential things. Limited resources mean, that focusing on wrong things not only wastes time that is already a scarcity but also wastes money that the teams do not have.

This means that the incubator should be well organized, and each meeting and workshops should have a clear purpose, payoff and aim. For instance, the teams found the concept of mentor speed dates to be a good concept, but hoped that after initial meet ups mentoring would be done in a more focused way. This could be done by making sure that each team had sufficient time with the mentors that were most valuable to them in different points of their development.

Masterclass workshops with specialist mentors were seen throughout the workshops as being helpful, especially the ones offering concrete results like the branding workshops which had the teams diving deeper into their purpose, mission, vision and customers. Business basics workshops were not seen as useful, but as mentioned earlier, this depended on whether the team had a previous background in the game business. Most teams agreed that they would find it helpful to have free shared templates for mandatory sheets (contracts, agreements, business canvas, strategy papers, and others).

4.4.2 Funding

Funding is hard for every early stage startup, but the games industry can be extra tricky due to its volatile nature. Investors especially are more reluctant to put their money into a game startup due to their lack of experience in the industry.

Funding came up in conversations with both batches, during workshops and weekly meetups and in conversations between the teams, more than any other subject during the period I spent working with the Farm teams.

Smallbiztrends (2019) highlights that 82% of business failure is due to poor cash management. Many early stage startups use the “FFF” approach to funding, which spells out friends, family and fools. Smallbiztrends (2019) seconds this approach stating that most startups rely on personal savings and income from another job during their first year of operations. Most outside financing is used on equipment, supplies and marketing.

The teams had three-fold expectations regarding how they hoped attending the incubator program would help them in their financial development. Firstly, Farm League did promote the possibility to do outsourcing through them in projects, which would allow the teams to divide their attention between making money through outsourced projects to support their

own development and keep working on their own game with a smaller team. Secondly, the teams were looking to obtain knowledge about different funding options in Finland and through global networks and receive free shared templates that would make the application process easier. Many teams also struggled with valuation, and hoped to get help from experts defining their numbers and determining their scope, to secure the best funding possible and with the best success rate possible. Thirdly, teams hoped to be able to network with viable investors and attend relevant events through the incubator program.

4.4.3 Building valuable connections

Teams were quite unsure, especially during the application period and at the beginning, regarding what they were looking to gain during their stay. Despite this, most teams mentioned from the beginning that they were keen to network with industry professionals and other starting teams. During the observation period and workshops, building networks and creating valuable connections was among the top topics throughout.

Access to mentoring and professionals, community and network building and getting noticed by publishers and investors were the shared interest of all the teams and mentioned in most workshops, as either gains to be made through the Farm or as pains the teams were hoping the Farm could help them relieve or solve.

The Farm organized mentor speed-dates during the year 2019. The events were well-liked, but the teams did bring up during conversations and workshops that they felt like the events ended up wasting the time of some of the mentors in attendance, if no teams had questions for the specific mentor at the time, and they sometimes felt compelled to come up with questions.

During workshops teams suggested that the building of these kinds of connections could be helped by organizing demonstration days, where teams could showcase their prototypes and demos to a specific audience of industry professionals and peers, and receive feedback on their initial idea and build.

Demo days were organized at the Games Factory during the spring of 2019, they were meant to be monthly, but did not really end up being a huge success. People failed to inform if they were attending or what kind of games would be showcased, and the days ended up as a gathering of a few - mostly the same people.

International Game Developers Association also arranges demo corners during their monthly meet ups. IGDA events are a big possibility for starting teams to network and showcase their talent. The events are open for all IGDA members and are often visited by a wide range of industry professionals. Starting teams might benefit from building connections through the incubator program by building some connections beforehand.

Other measures hoped for the incubator included excursions to game studios like Rovio and Supercell, direct investor mentoring, investor events and pitching, finding and assigning suitable mentors for each team, mentoring and networking events and others. Getting noticed in an industry like this with a huge number of hopefuls setting out for success globally is a big struggle, and the role of an incubator can be the key in bridging the gap through their own pool of connections and networks.

Game Factory had frequent visitors from around the world during the spring of 2019. When the teams were forced to move from the original building after Games Factory was reorganized, they lost the community of teams residing at the building and at Maria01 next door, as well as the chance to meet global visitors ad hoc during their week.

4.4.4 Business skills

The business side of games, as mentioned, was more foreign to most of the teams than the game side. Especially branding and marketing, in addition to business basics of starting a company were things that almost all the teams wanted help with. The branding workshop, which saw them go through their mission, vision and strategic choices, was seen as extremely valuable by the teams.

Feedback from the incubator benchmarking supports the results gathered during the workshops. The shift from being “crafts people” to businesspeople is hard. Teams are passionate but lack the skills, and sometimes the attitude, needed to build a business, instead of just making games.

One of the single business skills that all of the teams seemed to struggle with, and that was mentioned in conversations throughout, was marketing. It is understandable, since startup teams really don’t have money to do marketing, and usually it ends up being either a solo project that the CEO tries to handle while doing everything else, or a team effort, but with limited skills and resources.

Teams also mentioned throughout the workshops that they would like to have different templates at hand for basic business necessities, such as applications, non-disclosure agreements, business canvases and other relevant business-related documents that need to be filled out. During fall of 2019, a Google Drive with relevant documents was made available to the teams. All of the results from the workshops were delivered to the Farm lead in the fall of 2019.

5 Results

The purpose of this thesis was to map out the current operations of the Farm League incubator operating in Helsinki. The goal was to produce knowledge and get valuable ideas on developing the service further. This meant working together in different groups and exploring both the expectations of incubator stakeholders and possibilities of the incubator program, and seeing how they met, and what could be done to bring them closer together through a service design process.

The combination of observation, interviews and workshops did yield concrete ideas for service development. The service was mapped out and the key themes and building blocks for the service were recognized to be individual coaching, mentoring, networking and workshops. The teams got to voice their opinions on the service as a whole and make suggestions for future developments.

The result, as far as the service goes, was that the teams did find the building blocks that the Farm League had as a basis for their existing service to be the right ones. Suggestions and ideas revolved around making existing services better and adding new dimensions to them. Teams find value in community, efficient knowledge sharing and sufficient support covering all aspects of their business.

Questions looking to be answered through the development process were, what common struggles the teams attending the Farm League incubator were facing, and how the teams were hoping that the Farm League program could help them overcome those struggles and reach their goals. So, the questions were two-fold: what the struggles were, and how did the teams hope they would be resolved by attending the program.

The development project did manage to answer the above-mentioned questions as discussed in the deliver stage. During early observations and attending first interviews with the teams and Farm lead, the teams did bring up similar struggles in the beginning, and also later in the program. Their struggles in the beginning included marketing, networking and doing the right things.

Throughout the development process it became clear that business basics, such as securing funding, mission, vision, strategy, customer segment and marketing, were things that felt relatively well understood, but still needed refining in all of the attending teams. Funding, especially, was found to be a tricky subject for startups in general, but especially game startups, due to the volatile market and lack of knowledge on the industry from the investor side. The teams were also told that the incubator could offer outsourcing opportunities which could help fund their development. This could not be realized during the development period.

The teams mentioned networking as one of their goals and challenges early on as well. They expressed that they were hoping, that by attending the incubator program, they would gain access to a wider industry network and be able to reach valuable connections through the incubator. They also hoped that they would receive tips on how to approach investors and receive mentoring from game business veterans.

Doing the right things boils down to the question of limited resources. Teams need to optimize their time management, and they have constant pressure to move forward with the development while simultaneously making sure they have enough funding to keep their business afloat, before they can start making money. Optimizing their resources means that each team member should focus on the right things, which is where the Farm League incubator comes in. Teams expected to get guidance on where they should focus on during each stage of their startup journey. They also wished that the incubator would offer templates on the most common documents like plans, applications, agreements and contracts.

Figure 15: The Farm League progress (Farm League, 2019).

When this thesis process started in January 2019, the Farm League was also just starting its official first batch. The progress bar above (Figure 16) represents the duration of the program, with the boss fights marking different steps in the teams' progress. The incubator had a loose idea of how the program would progress, which is shown above. There was an idea of which building blocks would be offered as a part of the service. These included office space, guidance, mentoring, networking, workshops and outsourcing. How everything would be arranged during the spring was figured out as the months rolled by.

In early spring it was decided, together with the Farm Lead, that weekly meetings with the teams would be beneficial, where everyone would tell their progress during the week – like a scrum weekly. This was intended for sharing current news, asking questions and community building.

Mentor speed dates, where teams could meet mentors according to their schedules and interact with many different mentors during a fairly short time, were added to the schedule. Workshops were arranged according to demand, usually on a short notice, which meant that attendance was often fairly small.

When the second batch started in the fall of 2019, the service had developed to the point that the Farm Lead published a rough sketch of a 4-week rotating timetable to the Slack channel. It basically involved a few events and the order in which they would appear. This timetable was also added to the Farm league calendar, so that teams would have a clearer understanding of recurring events.

The rotating timetable had Farm meetings each week, company status update and hands on mentoring with the Farm Lead in week one, mentor speed date in week two, masterclass workshop in week three and business basics workshop in week four. This timetable was used as a basis for ideation in workshops 4 and 5, and it did help bring structure to the service.

Figure 16: LGIN service offering (LGIN, 2020).

At the time of this thesis being published, the Farm League is in the process of rebranding and reorganizing as Living Game Intelligence Network. The picture above (Figure 17) is a representation of the new service. The mentoring is more personalized, with a suitable mentor selected to each team with the help of the LGIN lead. Workshops are still offered on game development and business subjects. Networking with mentors and other teams is a part of the offering, as well as coaching. The service is remotely organized, with teams gathering together for the events and communicating online. No office space or tables are included.

FARM LEAGUE

GAME INCUBATION & OUTSOURCING

Content Harmony B2B Customer Persona Template

Photo by Tim Gouw on Unsplash

Janne, the visionary CEO of Survival Heroes Oy

Janne's Story:

Janne is the CEO at Survival Heroes' headquarters in Helsinki where he has been attending an incubator program with his team for 4 months. He used to study computer science and work in an IT company before making his hobby into a career and taking a dive into the start up life in the game industry. He has a lot of passion for building games and has managed to put together a team with a diverse background and knowledge base, but he's struggling with networking in the industry, figuring out how to make ends meet financially and accumulating knowledge from industry veterans to give his team the best shot at success.

Real Quote:

"I believe in my purpose and vision, but the closer we get to succeeding, the more feels at stake and the more anxious that makes me."

Figure 17: Persona draft

Above (Figure 18) is a quick persona drafted from workshop answers and data gathered in the spring and early fall of 2019. A more extensive persona draft can be found in the appendices of this thesis. This persona highlights of the key customers of an incubator – the attending teams.

A persona is a profile based on real research that represents a group of people with shared needs or common behavior patterns. Personas can help make groups with similar service needs more understandable. They can be a useful reference throughout the design process. These persona profiles should be refreshed around once a year to make sure they stay relevant. (Stickdorn et. al. 2018, 41.)

Using this persona profile along with other information gathered during the observation and workshop period, the service around Farm League can be developed into the direction it needs to go to serve the teams well.

6 Discussion

6.1 Evaluation of method

The double diamond approach makes the value of qualitative research tangible. Early stakeholder involvement, early user feedback and iterative improvement as well as making “shitty first drafts” of what could be are key to this process. To assess the value that changes suggested during this process loop bring, the findings should be taken to action first, and then another iterative research, ideation and prototyping loop could be made. (Stickdorn et. al. 2018, 467.)

The service design double diamond and qualitative methods were a right fit with this kind of development project. Nonaka et. al. (2015, 18) said that knowledge is derived from subjective perceptions of people in a certain context and made objective through a social process between a group or individuals in a specific setting. This was achieved in the development project by creating different groups of individuals in each workshop as well as utilizing observation and interviews, in addition to the workshops.

In some workshops the me-we-us method was used - having each individual think on their own first before pairing up or splitting into small groups, to eventually going through the findings with the whole group of attendees. In some cases the teams had the chance to work as a group in the workshop, like in the value proposition canvas workshop, but for most workshops the teams were knowingly split up and made to work with their peers, creating possibilities for combining, sharing and creating new knowledge.

Knowledge sharing and knowledge creation during the development process were successful, and different opportunities for knowledge creation were identified as discussed above. Value can be created, both for the service provider and the stakeholders already, by making small changes to the service offering and developing the service blocks further, as is discussed in more detail below.

The initial goal was to gather the information from the Farm League teams, mentors and other connections to find out how the current service met the teams’ needs, what their common struggles were and how the incubator could serve the teams and other stakeholders even better in the future. According to Alasuutari (2011), in qualitative analysis the data gathered is treated as a single unit that sheds light to the structure of a singular logical entity.

The goals of this thesis were met for the most part by using different qualitative research methods and analyzing information and ideas that were gathered. The data was added on top of existing findings and utilized in the next phase throughout the project, thus bringing everything together around the same goal.

Extensive interviews were not done, which would be something that could have benefited this project even more. It is suggested that individual and group interviews are used to gather more qualitative data, should this project be taken further. All of the data gathered so far can be used as reference and basis for further developments.

Teams gave mostly positive feedback on the workshops as well, but the key struggle with organizing them was time. Startup teams really do not have time for anything extra, and every activity needs to have a payoff, or it becomes time wasted. This was especially difficult, since most service design workshops tend to require a lot more time than the teams had to spare. This resulted in most of the workshops being rushed or time running out before a proper wrap-up could be done.

The time management problem was especially apparent in workshops 2 and 3 with the teams, since both were only 1-hour workshops. Particularly, the value proposition canvas would have needed at least double the time, since the tool was new to the teams. This is also where teams did give feedback on the tool and time being unbalanced, and luckily the last two workshops were able to be organized as 2-hours long, since they also included new tools.

The shifts in the environment were another huge challenge during this project. When the project started in January 2019, Games Factory was still heavily involved in the incubator service. During the spring of 2019 the Farm lead was tied to the Games Factory crisis, which ended to the Factory filing for bankruptcy. This had a direct effect on the teams, with the lead being occupied, the resulting layoffs and the Farm space being earmarked back to Maria01. The second batch moved into the Factory, but had to move again shortly after to the new temporary space on Ensi linja. In the spring of 2020, no new Farm teams were taken on board, and the service is in the process of being reorganized as Living Game Intelligence Network, as explained earlier.

6.2 Validity and Reliability

Evaluating qualitative data in this project, when it comes to validity and reliability, can be affected by the sample size and the limited amount of data as a result. This was tackled, to some extent, by making comparisons to other international incubators during the benchmarking, as well as gathering data from two different batches of teams.

Edvardsson et. al. (2006, 20) suggest that customer observation can help identify customer needs that might otherwise go unnoticed. The validity and reliability of the observation was possibly affected by the fact that the observer was only present roughly 2 times a week for the duration of spring 2019, and only during Farm meetings for the start of the second batch. This could have resulted in something important being left unnoticed, due to the absence of the observer during the observation period. The observations were however honest, and all

the details were written down with as much precision as possible, taking each situation into account.

When it comes to validity and reliability of the workshops, the main issue, in addition to the scarcity of time, was that not everyone from the teams attended. Some teams did attend the workshops (at least some of them) with a larger representation, or alternated between attendants, but for the most part it was the CEOs or COOs who were present for the workshop. We can assume that they were speaking for their team during the workshops and have the most comprehensive understanding of the company, but their attendance is still affected by their individual views and limited by their knowledge.

According to Alasuutari (2011) qualitative research can be done when a large sample size and statistical analysis is either not necessary or not possible. This was the case in this project. The scarcity of data due to the limited sample size of incubator teams and the variations in attendance result in the reality that the results of this process are not general, but rather tied to this unique development project.

From an ethical point of view, it was not considered how teams or CEO's limiting the attendance of team members when it comes to the workshops would affect them on an individual level. The decisions were left to the teams and CEOs to determine who had the time and resources to attend.

Teams were not required to attend any workshops, and they were not given strict guidelines as to how many members should be in attendance. All the answers received during the observations and workshops were handled anonymously in the thesis. The materials were gathered after workshops by the organizer, and disposed of after the thesis process, in an orderly manner.

All the environmental factors did take a toll on the service and the teams, as well as the lead, which led to having to compromise and make do with what was possible. This could have affected the reliability of this thesis, because a proper view of the service at its best without distractions, could possibly not have been made.

6.3 Comparing results to the chosen theoretical framework

The game industry in Finland started out as a small group operation, that developed into the "demo scene" that is still active today. Assembly was one of the events that gathered gamers together already in the early 90's, and it still plays a part in the ecosystem. Knowledge-sharing has been exceptionally well developed in Finland because of the tight-knit community and relatively small local circles.

The early years of game industry were dominated by big companies, whose AAA games took up the best shelf spaces and had the biggest marketing budgets. Trends that Accenture named as changing the industry, however, are a developing customer base, digitalization, the definition of a game becoming broader and changing business models. Especially digitalization made it possible for basically anyone to publish a game. This however also means that competition is becoming more and more cut-throat.

Crogan (2015, 10) raises indie game development as a major component of the industry. Neogames (2018, 30) highlights that business focus for first round startups has increased. Startup teams rarely make it on their own, which is why ecosystems and their possibility to offer co-location and collaboration benefit game startups and other micro businesses (Crogan 2015, 6-7).

This development project had the aim to help build a service that can help teams of indie developers and early startups at the beginning of their journey. At the beginning of the project Farm League had the means to offer co-location and various forms of collaboration within the game community and in the startup scene.

Neogames (2018, 30) mentions the possibility for subcontracting, as well as junior employees being educated through work for hire, as opportunities for startups to build sustainable business. Strong ecosystems drive connectedness and enable the sharing of knowledge and networks (Global Startup Ecosystem Report, 2019). Incubators and regional game clusters bring real value to the ecosystem as well as a strong community (Neogames 2018).

There is a need in the industry for hubs and services like Farm League and Games Factory and their successors. New teams struggle with funding and their level of professionalism. They often need help to build a sustainable business and have a better chance of making it in the cut-throat industry. An incubator can help young teams forward by offering their networks at their disposal for outsourcing possibilities, apprenticeships and mentoring as well as a community and a space for discussions.

Improved co-operation and wider range of possibilities are the likely outcomes of becoming familiar with the way colleagues, cooperators and others understand reality (Bukh et. al. 2005, 18-19). This was realized through the development process and in the service by encouraging interactions. Interactions like discussions, experience sharing or observation by individuals in groups can help crystallize and amplify knowledge.

Knowledge needs to be edited, combined, processed and actualized through actions, reflections and practice so that it can be internalized by each individual, as presented in the SECI model by Nonaka et. al. The development work helped the author of this thesis to understand

the importance and possibilities for each of these steps when creating a knowledge-sharing structure such as an incubator.

During the development project it was discovered that, through its service, the incubator makes room (ba) for sharing, utilizing and creating knowledge through different interactions in changing contexts. It also offers a possibility to learn from professionals, peers and industry veterans, through mentoring, scheduled educational activities and networking. During their stay at the incubator, teams do long-term communal work around creation and development of shared targets, which is mentioned as the basis for trialogical learning and knowledge creation by Järvelä et. al. (2006, 147).

Technical tacit knowledge like skills and crafts; "know-how", as well as cognitive tacit knowledge like mental models, beliefs and perceptions are everyday life for us as individuals, but might be alien to others (Nonaka & Takeuchi 1995, 8). Mentoring and apprenticeships are good practices for sharing and creating tacit knowledge (Frappaolo 2006, 10), since sharing knowledge requires human interactions and learning through practice (Nonaka et. al. 2015, 6-7).

The incubator makes room (ba) for sharing, utilizing and creating knowledge through different interactions in changing context. It also offers a possibility to learn from professionals, peers and industry veterans through mentoring, scheduled educational activities and networking. During their stay at the incubator, teams do long-term communal work around creation and development of shared targets, which is mentioned as the basis for trialogical learning and knowledge creation by Järvelä et. al. (2006, 147).

Value for the teams emerges in different social contexts. Value cannot be orchestrated by the service provider (incubator), it is formed in the context of collective and shared dynamic interactions. Value is determined by each team and individual and so it's personal, since not everyone will find value in the same services or interactions.

The incubator serves an important role in making sure teams have access to relevant information. Knowledge sharing and creation happens not only in interactions with professionals but also during peer-to-peer conversations and events.

Incubator teams have a true pool of knowledge and talent within them. There are also several other startups operating in different industries that provide possibilities for knowledge accumulation. If the case incubator or any other knowledge sharing structure wants to make the most of their opportunities to give teams a great start, the practices to promote more structured and thought-out sharing of knowledge should be encouraged.

During workshops teams suggested things like, every team coming with a pre-set agenda to present during the Farm meetings, or reserving a time slot for current game industry news. In customer dominant logic the goal is solving problems for the customer (Lemmink et. al. 2019). During this development project, the value of the service was found in experiences, being created all the time through interactions. Just like Vargo & Lusch (2004) pointed out, personal knowledge and skills (tacit knowledge) being utilized in social interactions are the most important things in value creation.

The link between ecosystems, knowledge creation and value creation is obvious. Day-to-day interactions, as well as more long-term apprenticeships and mentoring, are needed to make sure that knowledge can go through the whole creation cycle of socialization, externalization, combination and internalization (Nonaka et. al. 2015, 19). Ecosystems provide the environment for different kinds of interactions, and the game industry ecosystems make no exception. The role of an incubator is key in helping teams find and create opportunities for networking, social interactions and mentoring that make knowledge sharing and creation possible, thus providing an outlet for value creation as well.

6.4 Conclusion & future developments

The thesis reached its goal in terms of value creation since, through the development process, the building blocks of the service were found to be sufficient. Also, expectations towards the service were found to be realistic, and value creation found to be possible by making small changes to the existing service.

The key results were related to how the incubator service could help teams in their daily struggles and reaching their goals. Firstly, the teams struggled with the sheer amount of information, and by guiding them through their startup journey and helping them navigate what they need to know at any given point, value will be created for the teams. Secondly, the incubator can create value by assisting teams in making the shift from craftspeople who make games, to businesspeople who make money with games. From the business aspect, a huge issue and a possibility for the incubator to offer assistance is in securing funding and making sure the startups can keep their operations up and running. This could also include offering outsourcing, as planned in the beginning.

Final results were related to networking and expert support. Access to community and help in building networks are, along with mentoring practices, the absolute essence of an incubator. All of the teams, if nothing else, mentioned that they were looking to network and receive advice from industry professionals by attending the incubator program. Creating a mentoring practice that benefits both the teams and the mentors in a time-savvy manner, while harboring a startup and game community that can assist teams on the daily and provide connections, is what the incubator should focus on.

The service, in general, had the elements the teams had expected when joining the program. Teams felt that mentoring, workshops, networking and general guidance were exactly what they were looking for. The development project showed, however, that there were elements that still needed to be refined.

The Farm League is currently in the process of reinventing itself as the Living Game Intelligence Network, with a slightly different service model. So, the results of the workshops may need adaptation to benefit the new service. There are, however, a number of other game industry hubs and incubators in Finland and globally, who can make use of the results in their service development. A new incubator just recently opened at Tampere (Tampere Game Hub 2020), and Digi & Game Center launched in Jyväskylä, as well (Jyväskylä Digi & Game Center 2020). Globally, countries that still have very young ecosystems can adapt the service aspects according to their local and cultural needs.

Mentoring was the first big service aspect that started to take form during 2019. Teams gave feedback on the mentor speed dates, pointing out that they felt that they were wasting both the mentors time and their own, after the initial period of getting to know each other, since there really wasn't enough time to speak with the mentor they felt had the most value to them. This has been taken into consideration in LGIN and they are currently assigning a mentor to each team. Having a mentor assigned specifically to each team maximizes the possibilities for knowledge creation, by creating an ongoing discussion between the team and mentor. This makes possible passing on the tacit knowledge (for example, know-how and skills) of the mentor to the team, to be internalized by the individuals, to whom it is most valuable.

Mentor speed dates were still considered a good concept in the beginning, so those could still be used as a "matchmaking tool". It was also discussed, during the spring of 2019, that a profile could be drafted of every individual in the incubator, showcasing their talents and other key characteristics. This is something that could still be beneficial in networking, possible outsourcing and encouraging knowledge-sharing in a larger scale as well.

Teams were active with events and networking in general. The role of the incubator on suggesting events that are most valuable, and helping teams do risk assessment with international events and connections, can be crucial, depending on the team. How much effort should be put into organizing local events and traveling to international events from a value creation perspective is an interesting theme for future inspection.

Co-location creates day-to-day opportunities for peer-to-peer interactions between the teams. Co-locating with other startups in a setup like Maria01, or the former Games Factory building (now Arcade5), takes this effort even further by providing constant opportunities for interaction in different contexts with other teams, companies, experts, investors and potentially valuable visitors from all over the world. If incubator teams work mostly remotely, each

team must make more of an effort to make time for interacting, which also creates pressure for digital communication practices to be on point and active.

To make sure information is easily accessible and teams would have as much of the information categorized and readily available as possible, documents, materials and other information should be organized in one place. The Farm League did put up their own Google Drive during the development period. It should be assessed whether that is enough, or if an intranet or another team site could be made available through the incubator webpages. The key is avoiding teams wasting time looking for the same answers and struggling with the same problems. Teams could also be given responsibility in this, by making it easy to share information and templates on the site by anyone who first comes across it.

The building blocks are there and the teams gave good suggestions in terms of how the existing components could be made better. The development process could either start over from the develop stage to generate even more ideas around the existing service, or to find even more out of the box ideas. Another possibility would be to focus on what more could the service be, since this round did not produce any totally new information that couldn't be tied to making the existing service better.

This development project was an immensely valuable learning experience. During the development, new discoveries were made about the existing service and validation was provided for the overall choices already made. It was by no means a perfect execution, but it still did yield results that are usable. The results of the project offer many interesting possibilities for future research and development of incubator services. Learning by doing at its finest, what a ride it was.

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8 Figures

Visual cleanup of figures 1-3, 6 and 8 based on the sketches made by the author of the thesis: Riina Laihomäki 2020.

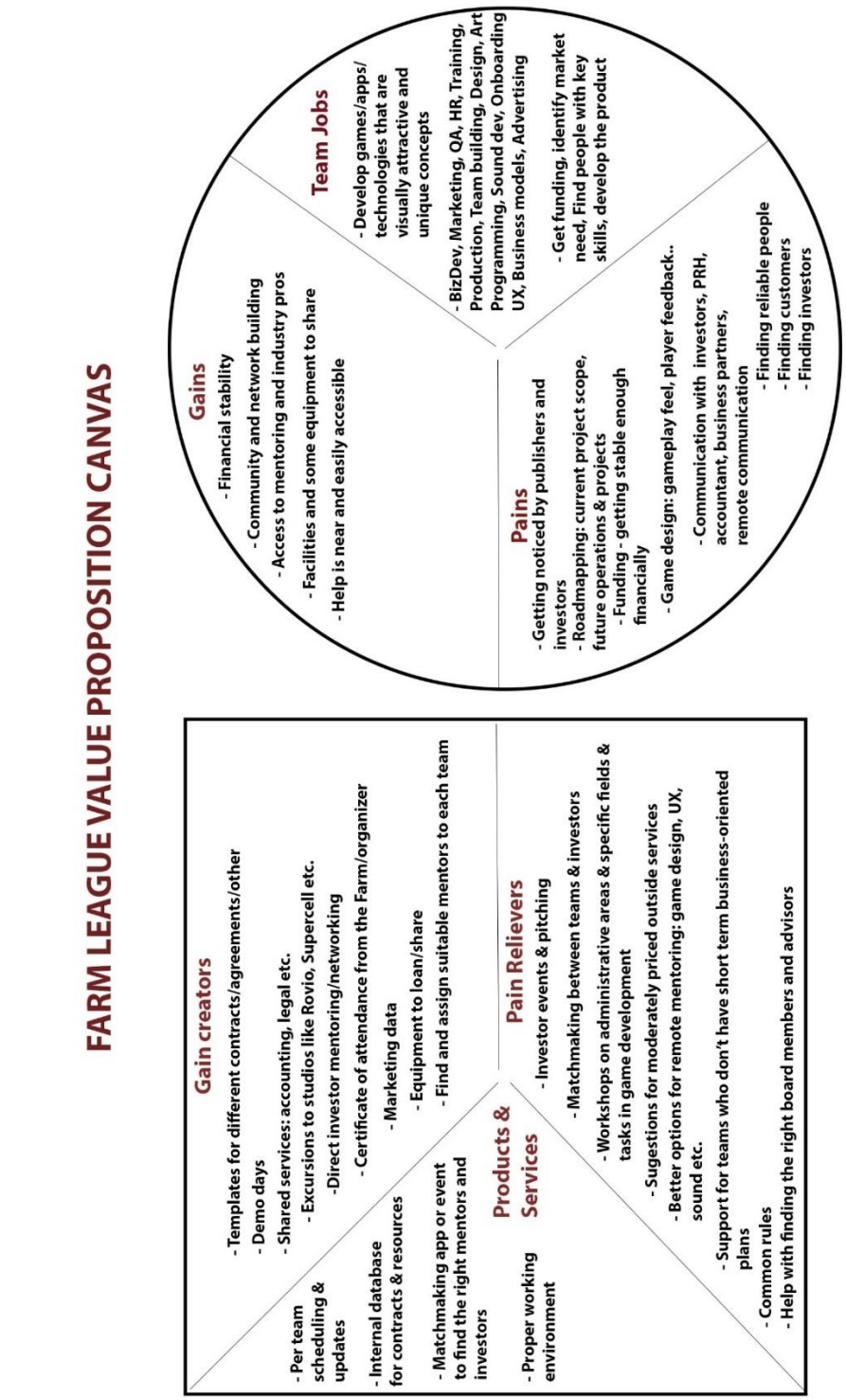
Tables

9 Appendices

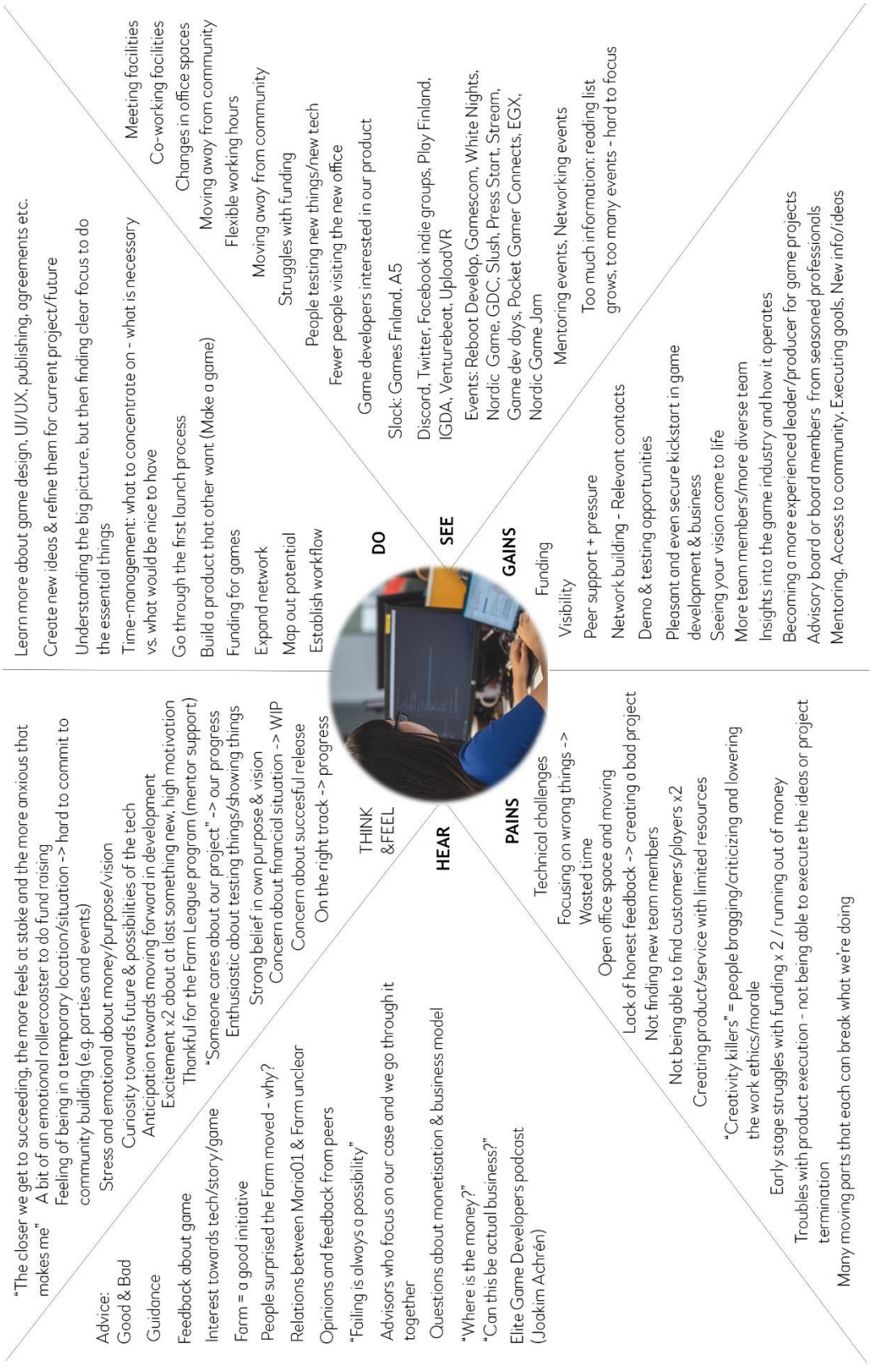
Appendix 1: Nightmare Farm, word cloud

Nightmare Farm attributes, word cloud

Appendix 2: Value proposition canvas



Appendix 3: Empathy Map



WEEK 1	WEEK 2	WEEK 3	WEEK 4
FRIDAY FARM MEET - Good concept. Creates connections between teams. WHAT COULD BE MADE BETTER - 1 Short status update, 2 Free discussion - More "What I learned this week" - 5 minute flash news from the Game industry - Have an agenda: What do we want to achieve with this meeting?	FRIDAY FARM MEET - 3 groups 30 minute themed weekly - Shorter status updates - One team could demo something each week (game or gamedev) - Concrete results of meetings?	FRIDAY FARM MEET - Should be in the morning (like 10AM instead of in the middle of the day) -> might stop/halt creative process - Could maybe be even every two weeks - Some of these could be substituted with a Farm team newsletter	FRIDAY FARM MEET
COMPANY STATUS UPDATE - Good to have, useful. - Serves as a sanity check - Good check list - Gives a good pause from the dev "Someone outside the company cares about the project" WHAT COULD BE MADE BETTER - Structure one by one maybe: the business canvas, strategy, process etc. - Actual comments on the project's progress - One-on-one or smaller groups could yield more honest reflections - Digital mindmap of the big picture -> Marked areas where team is focusing, traffic lights, to-do list - Playtesting	MENTOR SPEED DATE - Good concept for meeting mentors the first time/meeting new mentors WHAT COULD BE MADE BETTER - After initial speed date have following sessions with 1-2 mentors per team according to specific needs - Individual team bookings/meetings with specific problems - Book time with needed mentor - Longer discussions with 1 person more useful than several with different people - Create clear understanding where each mentor can help - Concrete tech mentoring - Clear understanding with mentors and teams how much time they are willing to spend - workshops vs 1-on-1	MASTERCLASS WORKSHOP (A SPECIALIST MENTOR) - So far very good,would recommend to future teams - Useful. Branding workshop was an awesome format - replicate to others? - Game design, Branding, Pitching, Legal WHAT COULD BE MADE BETTER - Put us to work in workshops to improve our game & business skills +way of working - Workshops that bring concrete results - Game production, Technical art (post processing) - Mindset change workshop for devs - How to ask help - How to publish (platform specific?)	BUSINESS BASICS WORKSHOP (FARMER/SPECIALIST MENTOR) - Has not felt very useful (depends on the team) - Useful, we have high level experts - Cashflow, Budgeting WHAT COULD BE MADE BETTER - Free shared templates welcome - we need a push to do mandatory sheets right (business canvas, marketing strategy etc.) - Grants, Biz Administration, Taxes Employment legislation, Accounting, Communication, Business strategy

Appendix 5: Persona

Janne, the visionary CEO of Survival Heroes Oy

Janne's Story:

Janne is the CEO at Survival Heroes' headquarters in Helsinki where he has been attending an incubator program with his team for 4 months. He used to study computer science and work in an IT company before making his hobby into a career and taking a dive into the startup life in the game industry. He has a lot of passion for building games and has managed to put together a team with a diverse background and knowledge base, but he's struggling with networking in the industry, figuring out how to make ends meet financially and accumulating knowledge from industry veterans to give his team the best shot at success.

Real Quote:

"I believe in my purpose and vision, but the closer we get to succeeding, the more feels at stake and the more anxious that makes me."

Psychographic Attributes

- No time or interest for social media if it's not for promotion or learning purposes
- Discord, Slack (A5, Games Finland), Facebook (indie groups, IGDA, Play Finland), LinkedIn
- Digitally fluent and capable, but overwhelmed with the amount of information
- CEO in the game industry
- Easy and well put together content that can be consumed while doing something else/quickly
- IGDA, Play Finland, Gamasutra, Venturebeat
- Prefers to get quick tidbits from the phone and allows more time for consumption when on laptop
- Function and title
- Personality type
- High energy and active person professionally
- Since money is tight must consider where to spend it. Can make spur of the moment decisions when finding a good deal
- Short attention span if the matter doesn't concern what he's trying to achieve
- More of an extrovert or has at least learned to come off as one since is the spokesperson for the company and must network constantly
- Shares their knowledge with peers and anyone interested in their cause
- Plays games on multiple platforms, listens to podcasts, watches movies and documents
- Takes the bike or public transport when possible, eats out on occasion – usually with industry experts/peers or potential investors

Demographic Identifiers

- 32
- Male
- CEO
- Programming/Computer science
- Master's Degree
- Helsinki

Goals & Motivations

- Acquire funding and find investors
- Learn more about making games and running a business
- Expand network
- Build a game that has potential in the market – get a kickstart in game development/business
- Efficiency (time management) and process needs (roadmap, workflow)
- Finding new team members and being able to launch the game with limited resources
- Finding mentors and advisory board/board members who are seasoned professional and have the kind of knowledge and expertise the team lacks

Their Roadblocks & Challenges	What they need from the Farm
● Early stage startup struggles in attracting funding & investors -> running out of money ● Technical challenges ● Focusing on wrong things -> wasting time because they can't see the forest from the trees ● Being able to find customers in a volatile and competitive market ● Not being able to execute ideas or termination of project	● Mentoring ● Visibility ● Demo & testing opportunities ● Relevant contacts / Network building ● Access to Community ● New information and ideas ● Peer support and pressure ● Masterclass workshops by seasoned professionals -> concrete results ● Help with business documents, communication with governmental organizations, business cornerstones (mission, vision, strategy, branding,marketing..)